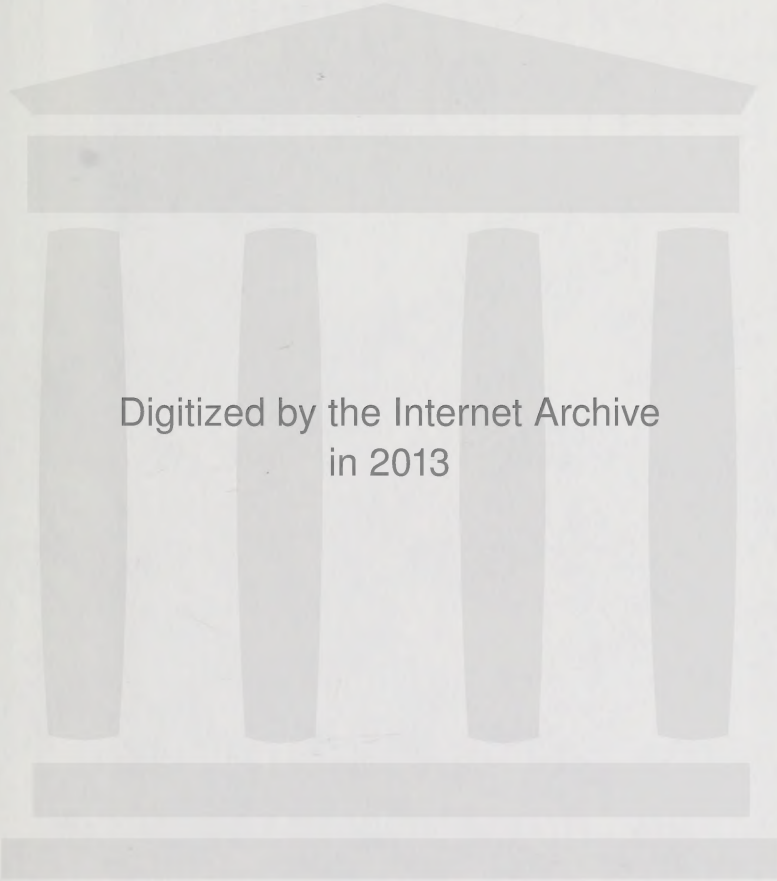






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1998-99
graduate
bulletin

the university of georgia

Directory

Note:

All numbers are in area code 706.

Graduate School:

Boyd Graduate Studies Research Center;
Graduate Admissions; 542-1787
Graduate Records Office; 542-4806
Graduation Office; 542-4803
Business Office; 542-4798

Bookstore, University:

Sanford Drive; 542-3171

Career Planning and Placement:

Clark Howell Hall; 542-3375

Fees Payment:

Business Services Building; 542-1625

Financial Aid:

220 Academic Building; 542-6147

Graduate Student Association:

517 Boyd Graduate Studies Research
Center; 542-4792

Health Service:

Gilbert Health Center; 542-1162

Housing Office:

Russell Hall; 542-1421

International Services and Programs:

210 Memorial Hall; 542-1557

Libraries:

Main Library, North Campus; 542-7501
Science Library, Boyd Graduate Studies
Research Center; 542-4535

Parking Services:

Perimeter Parking Lot; 542-7275

Registrar:

105 Academic Building; 542-4040

Student Activities:

Tate Student Center; 542-7774

**Student Affairs, Office of the Vice
President for:**

201 Academic Building; 542-3564

Tate Student Center:

Information; 542-3816

Graduate School web page: <http://www.gradsch.uga.edu/>

If you have a disability and need assistance in order to obtain this bulletin in an alternative format, please contact the Office of Graduate Admissions at (706) 542-1739.

1998-99 graduate bulletin

the university of georgia
a unit of the university system of georgia

Pursuant to directives of the President of this institution, the University of Georgia continues its affirmative implementation of equal opportunity to employees, students, covered contractors and vendors, and applicants for employment, admission, or contractor/vendor status. The University of Georgia will act in matters of employment, admissions, programs, and services free of prohibited bias with regard to race, creed, color, sex, national origin, religion, age, veteran status, or disability. Further, the University of Georgia will not maintain racially segregated facilities.

Continuation of the above policies is consistent with applicable provisions of the Civil Rights Act of 1964, the Education Amendments of 1972, Executive Order 11246, Revised Order 4, the Vietnam Era Veterans Readjustment Act of 1974, the Rehabilitation Act of 1973, and The Americans with Disabilities Act of 1990, as revised and/or amended, with implementing regulations. Accordingly, this institution will not discriminate in employment, admissions, programs, or services with regard to any position for which the applicant, employee, or student is qualified and will make reasonable accommodation for physical and mental limitations.

The Affirmative Action Plan implementing the above body of law, regulation, and policy is administered by Claude-Leonard Davis, Director of the UGA Equal Opportunity Office at 3 Peabody Hall, Athens, Georgia 30602-1622. Telephone inquiries concerning this Plan may be directed to (706) 542-7912. Copies of this Plan are available for inspection in the Equal Opportunity Office and in the UGA Main Library during normal weekday working hours.

While every effort is made to provide accurate and current information, the University reserves the right to change, without notice, statements in the bulletin concerning rules, policies, fees, curricula, courses, calendar, or other matters. Students enrolled at the University agree to comply with the University's rules and regulations and to accommodate to any changes necessary. Further, the statements set forth in this bulletin are for informational purposes only and should not be construed as the basis of a contract between a student and the institution.



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Academic Calendar 1998-1999

1998

Summer Quarter

Residence Halls Open	June 14, Su
Late Registration	June 16, T
Holiday	July 3, F

Long Session

Note: Classes meet for 75 minutes daily for 34 days

Classes Begin	June 17, W
Drop/Add	June 17-19, M-W
Midpoint of Session	July 10, F
Classes End	Aug. 4, T
Final Exams	Aug. 5-7, W-F

First Short Session

Note: Classes meet for 150 minutes daily for 17 days

Classes Begin	June 17, W
Drop/Add	June 17-19, W-F
Midpoint of Session	June 29, M
Classes End	July 10, F
Final Exams	July 13, M

Second Short Session

Note: Classes meet for 150 minutes daily for 17 days

Late Registration	July 13, M
Classes Begin	July 14, T
Drop/Add	July 14, T
Midpoint of Session	July 24, F
Classes End	Aug. 5, W
Final Exams	Aug. 6-7, Th-F

1998

Fall Semester

Residence Halls Open	Aug. 17, M
Graduate Student Orientation	Aug. 20, Th
Late Registration	Aug. 20-21, Th-F
Classes Begin	Aug. 24, M
Drop/Add	Aug. 24-27, M-Th
Holiday (Labor Day)	Sept. 7, M
Midpoint of Semester	Oct. 14, W
Thanksgiving Recess	Nov. 25-27, W-F
Classes Resume	Nov. 30, M
Classes End	Dec. 10, Th
Reading Day	Dec. 11, F
Final Exams	Dec. 14-18, M-F
Commencement	Dec. 19, Sa

1999**Spring Semester**

Residence Halls Open	Jan. 3, Su
Late Registration	Jan. 6, W
Classes Begin	Jan. 7, Th
Drop/Add	Jan. 7-8, 11-12, Th-F, M-T
Holiday (MLK Day)	Jan. 18, M
Midpoint of Semester	Mar. 3, W
Spring Break	Mar. 6-14, Sa-Su
Classes Resume	Mar. 15, M
Classes End	Apr. 29, Th
Reading Day	Apr. 30, F
Final Exams	May 3-7, M-F
Commencement	May 8, Sa

1999**Summer Semester**

Pre-Summer Session

Note: Classes meet for *120 minutes daily, 18/19 days of classes*

Residence Halls Open	May 12, W
Late Registration	May 14, F
Classes Begin	May 17, M
Drop/Add	May 17, M
Holiday (Memorial Day)	May 31, M
Classes End	June 10, Th
Final Exams	June 11, F

Long Session

Note: Classes meet for *60 minutes daily, 38 days of classes*

Residence Halls Open	June 8, T
Late Registration	June 11, F
Classes Begin	June 14, M
Drop/Add	June 14-16, M-W
Holiday	July 5, M
Midpoint of Session	July 9, F
Classes End	Aug. 5, Th
Final Exams	Aug. 6, 9-10, F, M-T

Short Session I

Note: Classes meet for *120 minutes daily, 19 days of classes*

Residence Halls Open	June 8, T
Late Registration	June 11, F
Classes Begin	June 14, M
Drop/Add	June 14-16, M-W
Midpoint of Session	June 25, F
Holiday	July 5, M
Classes End	July 9, F
Final Exams	July 12, M

Short Session II

Note: Classes meet for *120 minutes daily, 19 days of classes*

Late Registration	July 12, M
Classes Begin	July 13, T
Drop/Add	July 13-14, T-W
Midpoint of Session	July 26, M
Classes End	Aug. 6, F
Final Exams	Aug. 9-10, M-T

Note: This Calendar is correct as of the date of this publication. The Calendar may be subject to change during the next year. Please refer to the Schedule of Classes and/or other special announcements that may be forthcoming.



The U

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The University System of Georgia

The University System of Georgia includes 34 state-sponsored, public institutions located throughout Georgia 4 comprehensive and special purpose universities, 2 regional universities, 13 state universities and colleges, and 15 two-year colleges.

A 15-member constitutional Board of Regents one from each of the state's 11 Congressional Districts and five from the state-at-large governs the University System, which was established in 1932. Board members are appointed by the Governor, subject to state senate confirmation, for seven-year terms.

The Chairperson, the Vice Chairperson, and other officers of the Board are elected by its membership. The Chancellor, who is not a Board member, is the chief executive officer of the Board and chief administrative officer of the University System.

The overall programs and services of the University System are offered through three major components: Instruction, Public Service/Continuing Education, Research.

Board of Regents' policies for government, management, and control of the University System and the Chancellor's administrative actions provide institutions a high degree of autonomy. The President is the executive head of each institution and is recommended by the Chancellor and appointed by the Board.

The University System Advisory Council, with 34 committees, engenders continual dialogue on major academic and administrative matters and makes recommendations to the Chancellor, who transmits them to the Board as appropriate, regarding academic and administrative operations in the System. The Council consists of the Chancellor, the Vice Chancellor, and all Presidents as voting members. It includes other officials of institutions as nonvoting members. The Council's 21 academic and 13 administrative committees are composed of institu-

tional representatives, typically one from each unit, and deal with matters of System-wide application.

Matriculation fees and nonresident tuition fees for students at all institutions are established by the Board of Regents. All students pay matriculation fees while out-of-state students pay nonresident tuition in addition. Other fees for student services and activities are established by institutions, subject to Board of Regents' approval. Non-mandatory fees established by institutions are subject to approval of the Board of Regents' office.

Institutions of the University System of Georgia

Comprehensive and Special Purpose Universities

Athens
The University of Georgia
Atlanta
Georgia Institute of Technology
Georgia State University
Augusta
Medical College of Georgia

State and Regional Universities

Albany
Albany State University
Americus
Georgia Southwestern State University
Augusta
Augusta State University
Carrollton
State University of West Georgia
Columbus
Columbus State University
Dahlonega
North Georgia College and State University
Fort Valley
Fort Valley State University
Marietta
Kennesaw State University
Southern Polytechnic State University
Milledgeville
Georgia College and State University
Morrow
Clayton College and State University
Savannah
Armstrong Atlantic State University
Savannah State University
Statesboro
Georgia Southern University
Valdosta
Valdosta State University

Two-Year Colleges

Albany
Darton College
Atlanta
Atlanta Metropolitan College
Bainbridge
Bainbridge College
Barnesville
Gordon College
Brunswick
Coastal Georgia Community College
Cochran
Middle Georgia College
Dalton
Dalton College
Decatur
Georgia Perimeter College
Douglas
South Georgia College
Gainesville
Gainesville College
Macon
Macon College
Rome
Floyd College
Swainsboro
East Georgia College
Tifton
Abraham Baldwin Agricultural College
Waycross
Waycross College

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Bruce T. Shutt, *Registrar and Associate Vice President for Student Affairs*

William C. Marshall, *Associate Registrar*

Gary D. Moore, *Associate Registrar*

Admissions (Undergraduate)

Nancy G. McDuff, *Director*

John W. Albright, *Senior Associate Director*

Carol S. Nobles, *Associate Director*

Libraries

William Gray Potter, *University Librarian*

Colleges and Schools

College of Arts and Sciences (1801)

School of Art

School of Music

Wyatt W. Anderson, *Dean*

College of Agricultural and Environmental Sciences (1859)

Gale A. Buchanan, *Dean*

School of Law (1859)

David E. Shipley, *Dean*

College of Pharmacy (1903)

Stuart Feldman, *Dean*

Daniel B. Warnell School of Forest Resources (1906)

Arnett C. Mace, Jr., *Dean*

College of Education (1908)

Russell H. Yeany, Jr., *Dean*

Graduate School (1910)

Gordhan L. Patel, *Dean*

C. Herman and Mary Virginia Terry

College of Business (1912)

J.M. Tull School of Accounting (1977)

P. George Benson, *Dean*

Henry W. Grady College of Journalism and Mass Communication (1915)

John Thomas Russell, *Dean*

College of Family and Consumer Sciences (1933)

Sharon Y. Nickols, *Dean*

College of Veterinary Medicine (1946)

Keith W. Prasse, *Dean*

School of Social Work (1964)

Bonnie L. Yegidis, *Dean*

School of Environmental Design (1969)

John Francis Crowley, III, *Dean*

Administrative Officers of the Graduate School

Gordhan L. Patel, A.B., Ph.D., *Dean*

Marilyn Newhoff, B.A., M.A., Ph.D.,
Associate Dean

Marjorie Gordon, B.A., M.A., Ph.D.,
Assistant Dean

Mary Ann Keller, A.B.J., *Director of
Graduate Admissions*

Sherri L. Ledford, B.A., M.Ed., *Graduate
Program Administrator*

Jarvis W. McArthur, B.S., M.S.,
Coordinator, Recruitment and Retention

General University Information



General University Information

History

The University of Georgia

When the University of Georgia was incorporated by an act of the General Assembly on January 27, 1785, Georgia became the first state to charter a state-supported university. In 1784 the General Assembly had set aside 40,000 acres of land to endow a college or seminary of learning.

At the first meeting of the board of trustees, held in Augusta on February 13, 1786, Abraham Baldwin was selected president of the University. Baldwin, a native of Connecticut and a graduate of Yale University who had come to Georgia in 1784, drafted the charter adopted by the General Assembly.

The University was actually established in 1801 when a committee of the board of trustees selected a land site. John Milledge, later a governor of the state, purchased and gave to the board of trustees the chosen tract of 633 acres on the banks of the Oconee River in northeast Georgia.

Josiah Meigs was named president of the University and work was begun on the first building, originally called Franklin College in honor of Benjamin Franklin and now known as Old College. The University graduated its first class in 1804.

The curriculum of traditional classical studies was broadened in 1843 to include courses in law, and again in 1872 when the University received federal funds for instruction in agriculture and mechanical arts.

Thirteen schools and colleges, with auxiliary divisions, carry on the University's programs of teaching, research and service. These colleges and schools and the dates of their establishment as separate administrative units are: Franklin College of Arts and Sciences, 1801; College of Agricultural and Environmental Sciences, 1859; School of Law, 1859; College of Pharmacy, 1903;

D. B. Warnell School of Forest Resources 1906; College of Education, 1908; Graduate School, 1910; C. Herman and Mary Virginia Terry College of Business, 1912; Henry W. Grady College of Journalism and Mass Communication, 1915; College of Family and Consumer Sciences, 1933; College of Veterinary Medicine, 1946; School of Social Work, 1964; School of Environmental Design, 1969. The Division of General Extension, now the Georgia Center for Continuing Education, was incorporated into the University in 1947.

In 1931 the General Assembly of Georgia placed all state-supported institutions of higher education, including The University of Georgia, under the jurisdiction of a single board. This organization, known as the University System of Georgia, is governed by the Board of Regents. The Board of Regents' executive officer, the chancellor, exercises a general supervisory control over all institutions of the University System, with each institution having its own executive officers and faculty.

The Graduate School

Prior to the formal establishment of the Graduate School, courses of postgraduate status were offered under the control of a faculty committee on graduate studies. In 1910, the formal organization of graduate studies into a Graduate School was authorized. Dr. Willis H. Bocock served as the Graduate School's first dean and was succeeded by R. P. Stephens, George H. Boyd, Gerald B. Huff, Thomas H. Whitehead, Hardy M. Edwards, Jr., John C. Dowling, and the present dean, Gordhan L. Patel.

The Graduate School coordinates the graduate programs of all schools and colleges of the University. Matters of policy and procedure are determined by the graduate faculty through the graduate council. The graduate faculty consists of faculty mem-

bers appointed by the President on the basis of productive research, effective teaching, and other creative activities. The policies adopted by the graduate council are administered by the dean of the Graduate School.

The traditional degrees, Master of Arts and Master of Science, are offered in 26 and 41 disciplines, respectively. The Doctor of Philosophy degree is offered in 71 disciplines. The University also offers professional master's degrees in 22 areas, the Specialist in Education degree in 23 fields, and professional doctoral degrees in education, music, and public administration.

Mission

The University of Georgia, a land-grant and sea-grant university with state-wide commitments and responsibilities, is the state's oldest, most comprehensive, and most diversified institution of higher education. Its motto, "to teach, to serve, and to inquire into the nature of things," reflects the University's integral and unique role in the conservation and enhancement of state's and nation's intellectual, cultural, and environmental heritage.

The University of Georgia shares with the other research universities of the University System of Georgia the following core characteristics:

1. a statewide responsibility and commitment to excellence and academic achievements having national and international recognition;
2. a commitment to excellence in a teaching/learning environment dedicated to serve a diverse and well-prepared study body, to promote high levels of student achievement, and to provide appropriate academic support services;
3. a commitment to excellence in research, scholarship, and creative endeavors that are focused on organized programs to create, maintain, and apply new knowledge and theories; that promote instructional quality and effectiveness; and that enhance institutionally relevant faculty qualifications;
4. a commitment to excellence in public service, economic development, and technical assistance activities designed to address the strategic needs

of the State of Georgia along with a comprehensive offering of continuing education designed to meet the needs of Georgia's citizens in life-long learning and professional education;

5. a wide range of academic and professional programming at the baccalaureate, master's and doctoral levels.

With its statewide mission and core characteristics, the University of Georgia endeavors to prepare the University community and the state for full participation in the global society of the twenty-first century. Through its programs and practices, it seeks to foster the understanding of and respect for cultural differences necessary for an enlightened and educated citizenry. It further provides for cultural, ethnic, gender, and racial diversity in the faculty, staff, and student body. The University is committed to preparing the University community to appreciate the critical importance of a quality environment to an interdependent global society.

As a comprehensive land-grant and sea-grant institution, the University of Georgia offers baccalaureate, master's, doctoral and professional degrees in the arts, humanities, social sciences, biological sciences, physical sciences, agricultural and environmental sciences, business, education, environmental design, family and consumer sciences, forest resources, journalism and mass communication, law, pharmacy, social work, and veterinary medicine.

The University attracts students nationally and internationally as well as from within Georgia. It offers the state's broadest array of possibilities in graduate and professional education, and thus a large minority of the student body is post-baccalaureate. The predominantly Georgian undergraduate student body is a mix of highly qualified students originally admitted as freshmen and selected transfer students principally from other University System institutions.

With original scholarship, basic and applied research, and creative activities constituting an essential core from which to draw, the impact of the land-grant and sea-grant mission is reflected throughout the state. Cooperative extension, continuing education, public service, experiment stations, and technology transfer are all designed to enhance the well-being of the citizens of Georgia through their roles in economic, social, and community development.

As it has been historically, the University of Georgia is responsive to the evolution of the state's educational, social, and economic needs. It aspires through its strategic planning to even closer contact and interaction with public and private institutions throughout the state as well as with the citizens it serves.

Accreditation

The University of Georgia is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's, the Specialist in Education, and doctoral degrees. In addition, a number of the University's 13 colleges and schools are further accredited by appropriate educational associations.

Admission

Correspondence concerning admission to the Graduate School should be addressed to the Office of Graduate Admissions, The University of Georgia, Athens, Georgia 30602-7402, Email gradadm@arches.uga.edu or WWW.gradsch.uga.edu/. Inquiries about facilities for advanced study and research, programs of study, and specific departmental requirements should be addressed to the appropriate department.

Persons holding a bachelor's degree from any institution accredited by the proper regional accrediting association are eligible to apply for admission to the Graduate School. Applicants should have ranked in the upper half of their undergraduate class and should have completed the equivalent of an undergraduate major in the field in which they propose to study. Applicants are responsible for providing for the submission of all application materials required for admission. These items include but are not limited to: the general application for admission, a \$30 application-processing fee, transcripts, entrance test scores, letters of recommendation, and any supplemental material required by the department. The application-processing fee is non-refundable and will not be credited toward the matriculation fee. Materials submitted in support of an application will not be returned.

Applications and supporting credentials from domestic students must be received in the Office of Graduate Admissions by the following deadlines: Fall semester, July 1;

Spring semester, November 15; Summer semester (pre-session), April 1; and Summer semester (all other sessions), May 1. Applicants are urged to apply as early as possible up to one year in advance of the desired matriculation date. All applicants should consult with the graduate coordinator of the specific program for which they are making application to ascertain if the program adheres to an earlier application deadline. For information concerning deadlines for international applications, refer to the section entitled International Applicants.

Each completed application, with supporting materials, is referred to the department in which the applicant proposes to study, where it is considered by the faculty of that department. No applicant will be admitted without the recommendation of an academic unit. Final consideration is given by the dean of the Graduate School.

An applicant is admitted for a specific semester. Applicants may not register unless they have been notified of their acceptance to the Graduate School by the Office of Graduate Admissions. Admission is valid only when the person registers for the specified semester. The applicant, however, may request the Office of Graduate Admissions to defer his/ her registration to another semester. Deferred applications are reconsidered by the applicant's department.

Entrance Tests

Entrance test scores appropriate for each application must be sent to the Office of Graduate Admissions directly by the responsible testing agency. All test scores are subject to a five-year time limitation.

Scores on the verbal and quantitative sections of the General Test of the Graduate Record Examinations (GRE) are required for admission as a prospective candidate for most graduate degrees. The Miller Analogies Test (MAT) may be used in lieu of scores on the GRE for admission to most Master of Education and Specialist in Education degree programs. The GMAT is required for applicants seeking admission as prospective candidates for the Master of Business Administration and the Master of Accountancy degrees. Applicants for the Master of Marketing Research degree may submit either the GMAT or the GRE. The Master of Arts and Doctor of Philosophy programs in business administration accept

the GMAT or the GRE. The Master of Arts and Doctor of Philosophy programs in economics require the GRE. In all cases, applicants should consult the departments for specific information.

The Graduate Record Examinations and the Graduate Management Admission Test are offered several times a year at numerous testing centers in the United States and abroad. Advance registration is required. Registration forms and detailed information on the availability and character of each examination may be obtained from the Office of Graduate Admissions or by writing to the Educational Testing Service, Princeton, New Jersey 08541-6000. The Miller Analogies Test is given at various colleges and universities as approved by The Psychological Corporation. For information concerning the test as given at the University of Georgia, contact the Office of Testing and Evaluation, Clark Howell Hall, (706) 542-3183. For information concerning other approved testing centers, contact The Psychological Corporation, 555 Academic Court, San Antonio, Texas 78204-2498.

Retention of Records

Applications and supporting documents for those who were denied admission, who were accepted but failed to matriculate, or who did not complete the application procedure are retained in the Office of Graduate Admissions for a period of one year, after which they are discarded.

Applications submitted without the application fee are not processed. Such applications are retained for one year. Transcripts, test scores, and any other information submitted without an application are retained for a period of one year.

Immunization Requirements

All new students attending University System of Georgia institutions must show proof of immunization for measles, mumps, and rubella. Immunity may be verified by proof of (a) having had the disease, (b) having had the required immunizations, or (c) having had laboratory evidence of immune titer. In compliance with this policy, all new students must complete a University Health Service Report of Medical History form which will be sent by the Office of Graduate Admissions at the time of acceptance. This form should be returned to the Gilbert

Health Center at least two weeks prior to registration. Questions related to the certificate of immunization and/or the immunization policy should be directed to: The Medical Records Department, University Health Services, Gilbert Health Center, The University of Georgia, Athens, GA 30602-1755; telephone (706) 542-8617.

International Applicants

Since several months may be required to process an application from abroad, foreign nationals are urged to submit complete application materials as early as possible, but no more than one year in advance. The application must include the application form, two official transcripts from all colleges and universities attended, two official copies of test scores on an approved entrance test, a \$30 non-refundable application fee, and three letters of recommendation. Recommendations from teachers who are familiar with higher education programs in the United States are advantageous. International applicants, for whom English is not their native tongue, must submit Test of English as a Foreign Language (TOEFL) scores in addition to scores on an approved entrance examination. The application of a student from abroad, complete with supporting materials, must be in the Office of Graduate Admissions by the following deadlines: Fall semester, May 15; Spring semester, October 15; Summer semester (all sessions), February 15. Departments may have earlier application deadlines which take precedence over those established by the Graduate School. Applicants should consult the departments for their specific deadlines.

Application for Readmission

A student who has been out of school more than three semesters, including the summer semester, and wishes to return for the same admission classification and major must submit an application for readmission to the Office of Graduate Admissions. Note: Students who have not enrolled during the previous six years must submit an application for admission.

A student who has completed a graduate degree, and is applying for a second graduate degree, must submit an application for admission to the Office of Graduate Admissions.

A student who is not currently enrolled

and wishes to apply for a degree program different from that for which originally admitted must submit an application for admission to the Office of Graduate Admissions.

A currently enrolled student applying for a second graduate degree must submit an application for admission to the Office of Graduate Admissions.

Applications for admission or readmission must be submitted by the established deadlines.

Change of Degree Objective

A student wishing to change his or her degree objective may do so with the approval of the departmental graduate coordinator and the dean of the Graduate School. A form requesting a change in degree objective may be submitted to the Graduate School if a student has registration eligibility and is 1) changing from provisional admission status to the status of a prospective candidate for a degree within the same department; 2) changing from one degree objective to another degree objective within the same department; and/or 3) changing from one major to another within the same department.

A nondegree student or a transient student is not eligible to request a change of degree objective and must apply for admission to be considered for a graduate degree program. A currently enrolled student wishing to change from one degree and department/college to another degree and department/college must apply for admission to the new department/college.

Classification of Graduate Students

At the discretion of individual schools or departments and with the approval of the dean of the Graduate School, applicants may be considered for admission to one of the following classifications:

1. *Prospective candidate for a degree.* Applicants who meet all requirements for admission to a degree program may apply as prospective candidates for a graduate degree. Applicants must submit the following to the Office of Graduate Admissions: the general application for admission, a \$30 application-processing fee, two official copies of transcripts from each institution attended, except the University of Georgia, and two copies of official entrance test

scores. Applicants also must submit three letters of recommendation directly to the department to which they are applying, as well as any supplemental information required by the department. Applicants are responsible for contacting the departmental graduate coordinator for information regarding any special requirements and any supplemental material which may be needed.

Applicants upon whom some condition has been placed by the major department and/or the Graduate School may be admitted provisionally to a degree program if recommended by the department and approved by the graduate dean. Applicants for the Specialist in Education degree are not eligible for provisional admission.

2. *Nondegree (ND).* Applicants who do not intend to pursue a degree but who wish to take courses for professional advancement, licensure, or certification purposes, and who hold a baccalaureate degree or higher degree from a regionally accredited institution, should apply for nondegree status. Applicants must submit the following to the Office of Graduate Admissions: the general application for admission, a \$30 application-processing fee, two official copies of transcripts from the institution which awarded the highest degree, and a statement of purpose. Applicants are responsible for contacting the departmental graduate coordinator for information regarding any special requirements or supplemental material which may be needed.

Nondegree students who are later admitted as prospective degree candidates may apply a maximum of nine hours of course work taken in nondegree status toward a graduate degree program. The inclusion of such course work on a program of study is subject to the approval of the major professor, the departmental graduate coordinator, and the dean of the Graduate School. Courses taken in the nondegree status may not be included on a program of study for the Specialist in Education degree.

3. *Graduate Transient (TRANS).* Transient admission may be granted to students in good standing at regionally accredited graduate schools who wish to enroll for one semester at the University of Georgia. Applicants requesting this status must submit the following to the Office of Graduate Admissions: the general application for admission, a \$30 application-processing fee, and certification of graduate standing in a re-

gionally accredited institution. Additional information may be required by departments for admission to this classification; therefore, applicants should contact the appropriate department. Students admitted in this classification who later wish to enroll as prospective candidates for a degree must make formal application to the Graduate School as described in item 1 above.

Admission and Registration of Persons 62 Years of Age or Older

According to the provisions of an amendment to the Constitution of the State of Georgia, senior citizens who are residents of Georgia now have access to institutional services available through University System units at reduced cost. The rules adopted by the Board of Regents regarding admission and registration of persons 62 years of age or older in units of the University System are listed below:

1. Current or prospective students must be residents of Georgia, 62 years of age or older at the time of registration, and must present a birth certificate or other comparable written documentation of age to enable the registrar to determine eligibility.

2. Persons who have been accepted through regular admission procedures may enroll as regular students in courses offered for resident credit on a space available basis without payment of fees, other than supply, laboratory, shop, and transportation charges.

3. Prospective students must meet all system and institutional admission requirements to include official transcripts of all high school and/or college credit; entrance test scores, i.e., SAT, GRE, GMAT, etc.; letters of recommendation, and/or other materials as may be required.

4. Students will be provided access to all services available at any particular system unit which are applicable to the creation and maintenance of student and institutional records.

5. All degree-seeking students must meet all system, institutional, and legislated degree requirements such as the Regents' Test, major area examinations, preliminary and final oral and/or written examinations, and acceptable theses or dissertations.

6. Students may not enroll in dental, medical, veterinary, or law schools under the provisions of this policy.

The aforementioned rules became effective Fall 1977.

Registration

A graduate student using University facilities and/or staff time must register for a minimum of three hours of credit each semester. A student who holds an assistantship must register for a minimum of nine hours of credit each semester.

Complete registration instructions are included in the University of Georgia Schedule of Classes for each semester. The Schedule of Classes is available in the Office of the Registrar, departmental offices, and deans' offices the first week of the semester preceding the semester the student plans to register.

Course Load

A full-time course load is nine hours per semester during the academic year and six hours during the summer semester. The minimum/maximum course load for which a graduate student may enroll is governed by the following:

	Course Load (Sem. Hrs.)	
	Minimum	Maximum
Students who do not have an assistantship	3	15
Graduate Assistants:		
One-fourth (.25) time	9	12
One-third (.33) time	9	12
Four-ninths (.44) time	9	12
One-half (.50) time	9	12

To exceed the maximum course load, a student must obtain approval from his/her major professor and the dean of the Graduate School. The department head or the departmental graduate coordinator may sign the overload request in the absence of the student's major professor.

Generally, a request to exceed the maximum course load will not be approved unless the student satisfies the following guidelines: (1) is a prospective candidate (or candidate) for a graduate degree, (2) has a cumulative graduate average of 3.5 or higher, (3) has no incompletes on his/ her graduate record, and (4) is not a first-semester student.

The maximum course load for an eight-week summer session is 12 hours. Permis-

sion to exceed the maximum course load is not granted during the summer session.

Course Numbers

Courses numbered 8000-9999, taught by members of the graduate faculty, are advanced graduate courses and seminars which provide educational experiences at the highest level in a graduate student's program of study. Courses numbered 6000-6999 are fundamental knowledge courses; those numbered 7000-7999, except master's research (7000) and thesis (7300), are technique and professional courses. Courses numbered 6000-7999 are normally taken early in the graduate student's program of study. Joint undergraduate/graduate courses, numbered 4000-4999/6000-6999 and 5000-5999/ 7000-7999, in which undergraduate and graduate students are simultaneously enrolled are not normally used to provide the core requirements of a graduate degree program. Such courses may be used as electives and as service courses taken in other departments.

Enrollment in Graduate Courses—Law/Undergraduate Students

Students enrolled in the School of Law, who hold a bachelor's degree from an accredited university/college and who are in good standing, may enroll in graduate courses with approval of their advisor and the dean of the Graduate School. An approval form may be obtained in the School of Law.

Undergraduate students in good standing who are participating in the Honors Program may register for graduate courses with approval of their advisor and the dean of the Graduate School. An approval form may be obtained in the Honors Program Office.

Undergraduate students, having received prior approval, may enroll for up to six semester hours of credit to be included in a graduate program of study if they are within three hours of completing requirements for the undergraduate degree. They may enroll for three hours of such credit if they are within six hours of completing degree requirements. This credit must be in courses numbered 4000-5999 which also have 6000-7999 listings. If work in the 4000-5999 numbered courses is satisfactory, credit at the graduate level will be granted after admission and registration in the Graduate

School of the University of Georgia. A form to request prior approval may be obtained in the Graduate School.

Irregular Students

A student registered in the University as an irregular student cannot register for graduate courses. Course work taken in this classification cannot be counted for credit toward any graduate degree.

Grade Reporting System

The grade scale for graduate students is as follows:

- A Excellent
- B Good
- C Satisfactory
- D Passing
- F Failure

WF This designation indicates that the student was permitted to withdraw from a course while doing unsatisfactory work or withdrew after the midpoint of the grading period. The dropping of a course under these circumstances is equivalent to a failure. The symbol W will be assigned for withdrawals after the midpoint of a grading period in cases of a hardship. A determination that a hardship exists must be made by the Office of the Vice President for Student Affairs and communicated to the Graduate School.

S This symbol indicates that credit has been given for completion of degree requirements other than academic course work. The grade of S must be assigned in thesis and dissertation courses (7300, 9300), where student performance or progress is satisfactory. The use of this symbol is approved for seminars, applied projects, problems, internships, practicums, and research courses. Credit earned with an S grade will become part of cumulative hours earned, but the grade will not be included in the calculation of academic averages.

U This symbol indicates unsatisfactory performance or progress in an attempt to complete degree requirements other than academic course work. The grade of U must be assigned in thesis and dissertation

courses (7300, 9300), where student performance or progress is unsatisfactory. The use of this symbol has been approved for seminars, applied projects, problems, internships, practicums, and research courses. No credit is earned by a U grade. The grade is not included in the calculation of academic averages.

Once earned and recorded, a U grade cannot be changed to another grade. The grade of U is not acceptable as a terminal grade for thesis, problem, and dissertation courses.

A/S This symbol indicates that both A-F and S/U grading systems are permitted in a course. Such courses are identified in their course description and are limited in number. The instructor should explain the conditions for the use of both grading systems at the beginning of the course.

If a student does not receive a grade in a course for which he/she enrolled, one of the following designations must be placed on the student's record:

I This letter indicates that a student was doing satisfactory work, but for nonacademic reasons beyond his/her control, was unable to meet full requirements of the course. When an incomplete is not removed within two semesters, the I automatically becomes an F.

W This designation indicates that the student was permitted to withdraw from a course without penalty. Withdrawals without penalty will not be permitted after the midpoint of the total grading period except in cases of hardship. A determination that a hardship exists must be made by the Office of the Vice President for Student Affairs and communicated to the Graduate School.

V This designation indicates an audit. No credit is given for an audit. Students may not transfer from audit to credit status or vice versa after the closing of the drop/add period of each semester.

ER This symbol indicates an error in reporting. If not removed after one semester, the ER becomes a grade of

WF. Upon receiving a grade of ER, the student should consult with the course instructor.

All grade appeals must be initiated within one calendar year from the end of the term in which the grade was recorded.

For purposes of computing semester, yearly, and cumulative grade point averages, letter grades must be converted into numerical equivalents. The equivalents are:

A	4.0	WF	0
B	3.0	I	*
C	2.0	S	*
D	1.0	U	*
F	0	V	*

**Not computed*

Special Instructional Programs

Combined Degree Programs

The Graduate School offers certain combined degrees with other schools and colleges in the University.

Selected students in the College of Arts and Sciences may be eligible for completion of combined AB and MA or BS and MS programs in a four-year period. Students in the College may also be allowed to complete AB and MBA or BS and MBA programs in five years. Students interested in these degree objectives should contact the University Honors Program.

Certain students in the College of Family and Consumer Sciences may be eligible to pursue the combined degrees of BSHE and MBA; in the College of Journalism and Mass Communication students may be allowed to pursue combined programs leading to the ABJ and MBA degrees; and in the Terry College of Business students may be eligible to pursue combined programs leading to the BBA and MAcc degrees. All of these combined degree programs are designed to be completed in five years.

Students interested in the JD and MBA or JD and MAcc four-year combined degree programs should contact the School of Law and the Terry College of Business.

Selected pharmacy students may enter a combined degree program in which they receive the BS degree in pharmacy at the end of their third professional year and the MS degree in pharmacy at the end of one additional year.

Study Abroad/Exchange Programs

The various schools/colleges and departments of the University sponsor a number of study abroad programs. These include study in such countries as Belgium (international law), Italy (art, classics, Romance languages, journalism, drama, and landscape architecture), England (international business and British history, politics, literature, and culture), Brazil (Romance languages), and France (international business). Other opportunities for study overseas are available through the University System of Georgia institutions, through programs offered by other educational institutions, and through UGA exchange programs in Argentina, France, England, the Netherlands, and Germany.

A student should receive verification in writing from the major professor, graduate coordinator, and dean of the Graduate School that credit earned through a study abroad or exchange program may be applied to the program of study for the graduate degree. Students should also complete a Study Abroad Credit Approval Form, especially if they wish to apply student financial aid funds toward study abroad. This form may be obtained from the Office of International Education.

If the study abroad or exchange program offers courses through UGA inservice/off-campus credit or through the REGT Studies Abroad Curriculum, the credit earned will be recorded as resident credit, otherwise the credit earned will be recorded as transfer credit. Students are advised to contact the Graduate School about policies related to transfer credit.

To explore the many programs for study, work, research, travel, internships, teaching, and/or volunteering overseas, contact the Office of International Education, The University of Georgia, 200 Barrow Hall, Athens, Georgia 30602-2407, (706) 542-7903.

Cortona Program

The University of Georgia sponsors an interdisciplinary study abroad program year-round (fall, spring, summer) located in Cortona (Tuscany), Italy. The areas of study are art history, studio arts (book arts, ceramics, design, drawing, interior design, jewelry and metalsmithing, painting, papermaking, photography, printmaking, sculpture, and watercolor), landscape architecture, Italian, Italian culture, and women studies. Extensive travel to major sites (Rome, Pompeii, Siena, Urbino, Florence, Venice, etc.) are part of the itinerary. The program offers courses for undergraduate and graduate credit.

For more information concerning this program, contact Studies Abroad Cortona Program, School of Art, Bishop House, Room #1, (706) 542-7011.

Volcani Program for Graduate Students from the College of Agricultural and Environmental Sciences

A 1987 agreement between the University of Georgia and the Israeli Agricultural Research Organization, Volcani Center, provides for cooperative educational and research activities in the agricultural sciences and related topics. Graduate studies are available to University of Georgia students interested in conducting research in arid and semi-arid zones, leading to an advanced degree; to Israeli graduate students and to candidates from developing countries interested in international training, experience in Israel and a graduate degree from the University.

Cooperative Education

Cooperative Education (Co-op) is a structured educational plan alternating periods of work with periods of academic study. Cooperative Education helps students to relate career and academic goals and to develop skills systematically in both areas. Employment is salaried, related to the field of study, regular, continuing, increasing in difficulty and responsibility, and usually paralleling the academic curriculum.

University of Georgia cooperative education takes place in a variety of business, industrial, and federal government settings in many states throughout the country. Oppor-

tunities are available to graduate students at the master's level in a variety of academic fields. For information, write the Career Planning and Placement Center, Clark Howell Hall, or call (706) 542-3375.

Academic Regulations and Procedures

Statements set forth in this bulletin are for informational purposes only and should not be construed as the basis of a contract between a student and the institution. While every effort is made to provide accurate and current information, the University reserves the right to change, without notice, statements in the bulletin concerning rules, policies, fees, curricula, courses, calendar, or other matters. Students enrolled at the University agree to comply with the University's rules and regulations and to accommodate to any changes necessary.

Students have the responsibility for keeping themselves apprised of current graduation requirements for their particular degree program.

Use of Credit

Course and resident credit used to satisfy the requirements of one degree cannot be used to satisfy the requirements of another degree.

Cumulative Graduate Average

To be eligible for admission to candidacy and graduation, a student must maintain an average of 3.0 (B) on all graduate courses taken and on all courses on the program of study. No grade below C (2.0) will be accepted as part of a program of study for a graduate degree.

When a graduate course is repeated, the last grade received will be used in calculating the cumulative graduate average that is used for probation, dismissal, admission to candidacy, and graduation. Grades received in all graduate courses will be included in the graduate cumulative average.

Extension and Correspondence

Graduate credit is not allowed for work done in extension or by correspondence.

Resident Credit in Graduate Centers

I. For course work leading to a professional master's degree, credit on a resident basis will be granted for graduate courses taken at a graduate center approved by the Board of Regents, provided:

1. the student has been admitted to the Graduate School of the University of Georgia prior to taking the course;
2. the physical facilities such as classrooms, library, and teaching aids are adequate as determined by a site visit of at least three persons, one appointed by the dean of the school or college offering the course, one appointed by the Director of Libraries, and one appointed by the dean of the Graduate School; and
3. the instructor is the same one who teaches the course on campus, or is approved by the dean of the school or college offering the course and the dean of the Graduate School.

II. Resident credit will be granted for course work or research leading to degrees other than professional master's degrees offered at off-campus locations provided:

1. the student has been admitted to the Graduate School prior to taking the course;
2. the requirement of two consecutive semesters of full-time work on campus in Athens for all doctoral students is satisfied;
3. the requirement of two semesters of full-time work on campus in Athens (which need not be consecutive) is, in general, satisfied for all candidates for MA and MS degrees. An exception to the above may be made for students who prefer to spend one semester of full-time work abroad in a program of study approved by the University of Georgia or the Board of Regents. Such study shall be counted as resident credit; and
4. the instructor is the same one who teaches the course or directs the research on campus, or is approved by the dean of the school or college offering the work and the dean of the Graduate School.

III. Residence or nonresidence credit for Studies Abroad is determined by the de-

partment from which a student is seeking a degree.

Application for Graduation

An application for graduation must be filed with the Graduate School no later than Friday of the first full week of classes two semesters prior to the anticipated graduation date. Application forms may be obtained from the Graduate School. Candidates for graduate degrees should check periodically with the Graduate School concerning dates for filing applications as these dates and fees are subject to change.

Final Registration Requirement

Students must be registered at the University of Georgia for a minimum of three hours of credit the semester in which they complete all degree requirements. Once degree requirements have been completed, no further registration is required, even if the official graduation date is in a following semester.

A graduate course, GRSC 9270 (Graduate Study Completion), is designed for students completing degree requirements who will be using staff time or University facilities and for whom no regular course is appropriate. Permission to register for this course must be granted by the Graduate School.

Students will not be approved for graduation if they have a grade of I or ER which, when changed to a recorded grade, could cause the graduate grade point average to fall below the minimum required for graduation.

Graduation Exercises

Formal commencement exercises are held in June and December. Students who graduated in August may participate in the December commencement exercises if they wish to do so. Candidates for degrees are urged to participate in graduation exercises, but they are not required to attend.

Awarding Doctoral Degrees—University Faculty

No member of the faculty of the University of Georgia above the rank of instructor will be awarded a doctoral degree by the University.

Probation and Dismissal

Students may be dismissed by their department at the end of any semester if they have not made sufficient academic progress to warrant continuance of study. Termination of students will follow policies and procedures adopted by the department and reported to the Graduate School. Dismissal by an academic department may be appealed to the dean of the Graduate School after all avenues of appeal have been exhausted at the departmental level. When students are terminated by a department, but not simultaneously by the Graduate School, they may apply for admission to another graduate program if they wish to do so.

Students with a cumulative graduate course average below 3.0 for two consecutive terms are placed on academic probation by the Graduate School. They then must make a 3.0 or higher semester graduate average each succeeding semester that their overall cumulative graduate average is below 3.0. These students are no longer on probation when their cumulative graduate average is 3.0 or above. If they make below a 3.0 semester graduate average while on probation, they are dismissed. When students repeat a graduate course, the last grade will be utilized to calculate the cumulative graduate average that is used for probation, dismissal, admission to candidacy and graduation. Grades of S, U, I, and V will not be used in calculating the cumulative graduate average. When students are dismissed under the terms of this policy, they may not apply for admission to another graduate program offered by the University.

Students who are dismissed by the Graduate School for academic reasons may appeal the dismissal to the dean of the Graduate School. The appeal must be submitted to the dean within 10 working days following receipt of notice of dismissal. Information concerning the appeal process may be obtained in the Graduate School.

Appeals

University of Georgia students have the right to appeal academic decisions. Usually the appeal goes first to the unit responsible for the decision (for example, grades or departmental requirements to the department; college or school requirements to the school; university requirements to the Edu-

national Affairs Committee). An unfavorable ruling at one level can be appealed to the successive levels (viz. a department ruling can be appealed to the college in which the institutional unit is located; a college-level ruling can be appealed to the University Council Educational Affairs Committee; the Educational Affairs Committee ruling can be appealed to the President of the University; and the President's ruling can be appealed to the Board of Regents). Additional details on appeals of academic matters can be obtained from the Office of Academic Affairs, 110 Old College, telephone (706) 542-8947. Policies regarding appeals in the Graduate School may be obtained from the Office of the Dean, Room 516, Boyd Graduate Studies Research Center, or by phoning (706) 542-4795.

Student Education Records

The federal Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They include the following:

(1) The right to inspect and review the student's education records, subject to certain specific exceptions. A student wishing to review his/her education records should submit to the registrar, academic dean or other appropriate official a written request that identifies the records he/she wishes to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official will advise the student of the correct official to whom the request should be addressed.

(2) The right to request the amendment of the student's education records. A student may ask the University to amend a record that he/she believes is inaccurate or misleading. The student should write the University official responsible for the record, clearly identifying the part of the record he/she wants changed and specifying how it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his/her right to a hearing as well as the hearing procedures.

(3) The right to consent to disclosures of personally identifiable information contained

in the student's education records, except to the extent that FERPA authorizes disclosure without the student's consent. One exception is disclosure to other University officials who have been determined to have a legitimate educational interest in the information. A University official is a person employed by the University in an administrative, supervisory, academic, research, or support staff position; a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents of the University System of Georgia; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another University official in performing his/her duties. A University official has a legitimate educational interest if the official needs to review an education record in order to perform his/her official duties.

Upon request, the University also discloses education records without the student's consent to officials of another school in which a student seeks or intends to enroll. In addition, directory information may be disclosed without a student's consent unless the student has advised the registrar in writing and he/she wishes to restrict access to this information. "Directory information" includes the student's name, address, telephone listing, e-mail address, date and place of birth, major field of study, participation in officially recognized activities and sports, dates of attendance, degrees and awards received and the most recent previous educational agency or institution attended by the student, as well as the weight and height of members of athletic teams.

(4) The right to file a complaint with the U.S. Department of Education concerning the University's alleged failure to comply with FERPA. The name and address of the office that administers FERPA is Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202-4605.

Copies of the complete University policy statement regarding FERPA may be obtained from the Office of the Registrar.

Academic Honesty

Academic integrity is an adherence to a high standard of values regarding life and work in an academic community. Pursuit of knowledge and the creation of an atmos-

phere conducive to learning are both definite aspects of academic integrity, but its basis lies in the standard of honesty.

Students at the University of Georgia are responsible for maintaining and adhering to the strictest standards of honesty and integrity in every aspect of their lives. Honesty in academic matters is a large part of this obligation. Specific regulations governing student academic conduct are contained in the Student Handbook, and these should be read to avoid any misunderstanding.

Students and faculty who suspect that an act of academic dishonesty has taken place should contact the Office of the Vice President for Academic Affairs.

Research with Human Participants

As a matter of University policy, research projects involving human participants must not be carried out until an application describing the project has been submitted and approved by the Institutional Review Board in the Office of the Vice President for Research. This policy applies to all research, regardless of whether internal, external, or no funding is involved. Failure to obtain this approval for research is a violation of University and federal regulations. Human participation is considered to be involved any time data are collected on individuals even if there is no contact with the participants. The policy extends to all projects involving faculty, staff, students, or facilities of the University, including research performed by students as part of their degree or class requirements. The major professor is responsible for seeing that student projects are approved. Approval is necessary for any type of research in any area of study. Some, but not all, examples include marketing research, behavioral or psychological studies, research involving children in classrooms, and on-the-street interviews.

The detailed guidelines of this policy and the application forms necessary to obtain approval of a research protocol are available in the Office of the Vice President for Research, 606A, Graduate Studies Research Center. Questions concerning these guidelines may be directed to that office at (706) 542-3199. Projects involving no risk to subjects can usually be approved expeditiously, but it is recommended that the forms be submitted well in advance of beginning

the research and, if applicable, prior to submitting a proposal for external funding.

Student Services

Housing

There are 17 residence halls on campus which provide a variety of living options to accommodate the housing and academic needs of graduate and professional students.

While the majority of the residence halls operate according to the University's academic schedule, there are three housing facilities that provide continuous occupancy during academic recesses. Morris Hall, which houses 146 male students, Payne Hall, which houses 220 female students, and Reed Hall, which is a co-ed building that houses 297 students, are available to accommodate year-round housing requests.

Each residence facility is air-conditioned and Cable TV and local telephone service is provided in every room. Applications for on-campus housing will be accepted after students have been admitted to the University. Contact the Department of Housing, Russell Hall, The University of Georgia, Athens, Georgia 30602-5575, (706) 542-1421, for additional information.

Additionally, the Family Housing Complex at the University of Georgia offers 579 one- and two-bedroom furnished and unfurnished apartments. While these locations are typically occupied by University students who have children or are married, there are a limited number of one-bedroom accommodations available for single graduate and professional students. Applications and additional information may be obtained by writing or calling the Family Housing Office, The University of Georgia, 710 East Campus Road, Athens, Georgia 30602-4622, (706) 542-1473.

Food Services

University Food Services operates four food service facilities for general student use: Bolton Hall, Oglethorpe Hall, Snelling Hall, and the Tate Student Center. With the exception of the Tate Student Center, which operates under a cash only policy, students may pay for each meal on a cash basis or may purchase meal plans on an academic

year contract basis. Students who purchase the meal plan enjoy the privilege of unlimited access and unlimited servings as well as the choice of eating in any of the cafeterias. Students are also eligible to participate in special events offered by Food Services. In addition to the major facilities, Food Services provides various cash food outlets throughout the campus. For further information, write the Food Services Business Office, Snelling Hall, The University of Georgia, Athens, Georgia 30602-3772, call (706) 542-1256, or visit the Food Services web site at www.uga.edu/~food-serv.

Transportation

The Campus Transit System, which is funded each semester by a transportation fee paid by all students, provides bus service on a no-fare basis. The buses run on a regular schedule to all parts of the campus and in adjacent residential areas. Furthermore, the City of Athens and the University of Georgia have an arrangement that permits students to ride any Athens Transit System bus without charge upon presentation of University of Georgia identification card. The transportation fee includes a parking permit. All students are allowed to register cars on campus.

University Health Service

Before their arrival on campus, students must complete and return to the Gilbert Health Center the University Health Service Report of Medical History which includes a record of their immunizations. Students may not register for classes without documentation for the immunization requirements for new students mandated by the Board of Regents.

The Gilbert Health Center offers a comprehensive outpatient health care program to all students who are registered in classes. The Health Center, with its 13 full-time physicians and a complete clinical staff, has regular medical clinics as well as special clinics in acute care, women's health, dentistry, sports medicine, physical therapy, and allergy and travel medicine. Additionally, the Department of Health Promotion offers students preventive health and counseling programs in areas that include: alcohol, tobacco and other substances, campus safety, nutrition, sexual health, and stress management. The de-

partment also offers an anonymous HIV counseling and testing program. The mental health clinic offers individual, couples, and group therapy, a comprehensive eating disorders program, a relaxation therapy training room, and consultation, evaluation, and testing services. Supplemental health insurance is available to help cover costs of medical emergencies away from campus or beyond the scope of care available at the Health Center. For more information, write the Gilbert Health Center, The University of Georgia, Athens, Georgia 30602-1755, or call (706) 542-1162.

Career Planning and Placement

The Office of Career Planning and Placement in Clark Howell Hall assists students in exploring career opportunities and in formulating a job search campaign. It offers a comprehensive placement service, including campus interviews with prospective employers, job vacancy listings and referrals, credentials files, and continuing career counseling for students and alumni. In conjunction with these efforts, schools and departments have their own services which put students in touch with prospective employers in specific fields of study.

Students may contact the Student Employment Service in Clark Howell Hall for help in finding part-time work on campus, employment in the Athens community, and summer or vacation work. Assistance from this office is also available in finding full-time employment for students' spouses. For information, call (706) 542-3375 or the information/job opportunity hotline (706) 542-8427.

Non-academic employment at the University is handled through the Employment and Employee Relations Department, Human Resources Building, S. Jackson Street, The University of Georgia, Athens, Georgia 30602-4135. For information, call (706) 542-2623.

Disability Services

The mission of the Office of Disability Services (ODS) is to create an accessible academic, social, and physical environment for students with disabilities at the University of Georgia. ODS seeks to eliminate attitudinal barriers that exist on campus and serves as an advocate for students with disabilities. ODS also encourages students to develop

independence and responsibility as they participate in university life.

ODS provides services to students who have either a physical or mental impairment which substantially limits one or more major life activities, ie. ADD/ADHD, cerebral palsy, hearing impairments, psychological disorders, quadriplegia, acquired brain injuries, cardiac disease, deafness and blindness. To qualify for services, student must have a verifiable disability by providing current documentation from a qualified health professional.

ODS provides a variety of academic and support services to ensure equal access to university programs and activities. ODS also provides assistive devices and state-of-the-art adaptive computer equipment specifically designed for people with disabilities.

Centrally located on the first floor of Clark Howell Hall, ODS is open M-F from 8 am to 5 pm. For more information, call (706) 542-8719 or visit our web site at: <http://iris.dissvcs.uga.edu/~web/>.

Campus Security

Each year the University of Georgia publishes a campus security report. This report contains information on campus safety programs as well as advice on crime prevention and the procedures to follow in reporting crimes. The report also contains statistics about crimes on campus during the last three calendar years. This report is available upon request from the Office of Graduate Admissions, The University of Georgia, Athens, Georgia 30602-7402, (706) 542-1787.

Financial Information

Expenses

The University of Georgia will convert from the quarter system to the semester system beginning Fall 1998. Matriculation fees for the semester system will be determined in April 1998, after the printing of this bulletin. For semester fee information, visit the Graduate School web site at <http://www.gradsch.uga.edu> or call the Banking and Trust Department, (706) 542-1625. The web site will be updated with semester information as it becomes available.

The current (1997-98) estimate cost of education for a Georgia resident is \$10,960

per academic year. This estimate includes tuition and fees, books and supplies, room and board, insurance, and personal expenses. An additional out-of-state fee assessed of all non-Georgia residents increases this estimate to \$17,520. These estimates do not include travel.

Students who hold a graduate assistantship pay a matriculation fee of \$75 per academic year of two semesters, payable \$25 at the beginning of each semester. This figure is based on the minimum registration for a graduate assistant of nine hours each semester. Nonresident fees are waived for these graduate assistants. Students holding graduate assistantships must also pay the activity, athletic, transportation, and health fees.

The doctoral candidate must pay a \$50 microfilm fee. Those students pursuing degrees requiring a thesis or dissertation must also pay a binding fee of at least \$19.50 for the three copies retained by the university.

Agencies sponsoring regularly enrolled students who receive special academic programming or administrative services are expected to pay fees in addition to those normally charged for the usual administrative services. While rates charged will be determined by contract arrangements, the scheduled fees for such services will be \$125 per semester, payable in U.S. dollars only.

All fees at the University are subject to change at any time as approved by the Board of Regents.

Fee Refunds/Repayments

In order to receive a refund of fees due to withdrawal from school, students must contact the Office of the Vice President for Students Affairs and formally withdraw. (Note: Withdrawal from school cannot be accomplished through drop/add after the first day of class). Students who formally withdraw from the University on or before the first day of class are entitled to a refund of 100 percent of fees paid for that term; withdrawal after the first day of class but before the end of the first 10 percent (in time) of the period of enrollment, 90 percent; withdrawal after the first 10 percent (in time) of the period of enrollment but before the end of the first 25 percent (in time) of the period of enrollment, 50 percent; withdrawal after the first 25 percent (in time) of the period of enrollment but

before the end of the first 50 percent (in time) of the period of enrollment, 25 percent. Refunds will be made at the end of the term. No refunds for reduction in hours after the drop/add period are allowed unless such reduction is the fault of the University.

The following are not entitled to any refund of fees paid: students who withdraw after the first 50 percent (in time) of the period of enrollment, students suspended for disciplinary reasons, students who leave the University when disciplinary action is pending, or students who do not formally withdraw.

Students attending the University for the first time who receive assistance under Title IV of the Higher Education Act of 1965 as amended are entitled to a pro-rata refund of that portion of the tuition, fees, room and board, and other charges assessed the student by the institution equal to that portion of the period of enrollment for which the student has been charged that remains on the last day of attendance by the student up to the sixty percent point in time in the period of enrollment. In the event a student receives Title IV aid and fails to complete registration and/or fee payment for the academic term for which financial assistance was awarded, the full amount of the Title IV aid received must be repaid immediately. In the event a student receives Title IV aid, completes registration, and subsequently reduces his/her enrollment status or withdraws, the amount of funds to be returned to the Title IV programs will be in accordance with federal regulations concerning refunds and repayments to the Title IV programs.

All refunds, up to the amount of the aid received for the term, will be returned to the Title IV programs according to the following priority:

1. Federal Family Educational Loans
2. Federal Direct Student Loans
3. Federal Perkins Loans
4. Other federal sources of aid
5. Other state, private, or institutional aid
6. Student

All repayments, up to the amount of the aid received for the term, will be returned to the Title IV programs according to the following priority:

1. Federal Perkins Loans
2. Other federal sources of aid
3. Other state, private, or institutional aid

Academic Common Market

The University of Georgia participates in the Academic Common Market, an agreement among states in the southern region for sharing unique academic programs. Residents of the participating states who qualify for full (unconditional) admission to the specified graduate degree program and who are approved by their state coordinator may enroll at the University of Georgia on an in-state tuition basis.

To qualify for waiver of the non-resident fee, a student must establish eligibility for participation in the Academic Common Market by the midpoint of each semester. Eligibility is not retroactive to previous academic terms.

For further information about the Academic Common Market, persons should contact the Graduate School (706) 542-4795, or the Southern Regional Education Board, 1340 Spring Street, N.W., Atlanta, Georgia 30309.

Classification of Students for Tuition Purposes

With respect to resident/nonresident student classification, University System policies provide:

1. (a) If a person is 18 years or age or older, he or she may register as an in-state student only upon a showing that he or she had been a legal resident of Georgia for a period of at least twelve months immediately preceding the date of registration.
(b) No emancipated minor or other person 18 years of age or older shall be deemed to have gained or acquired in-state status for tuition purposes while attending any educational institution in this State, in the absence of a clear demonstration that he or she has in fact established legal residence in this State.
2. If a person is under 18 years of age, he or she may register as an in-state student only upon a showing that his or her supporting parent or guardian has been a legal resident of Georgia for a period of at least twelve months immediately preceding the date of registration.
3. If a parent or legal guardian of a minor changes his or her legal residence to another state following a period of

legal residence in Georgia, the minor may continue to take courses for a period of twelve consecutive months on the payment of in-state tuition. After the expiration of the twelve-month period, the student may continue his or her registration only upon the payment of fees at the out-of-state rate.

4. In the event that a legal resident of Georgia is appointed as guardian of a nonresident minor, such minor will not be permitted to register as an in-state student until the expiration of one year from the date of court appointment, and then only upon a proper showing that such appointment was not made to avoid payment of the out-of-state fees.
5. Aliens shall be classified as nonresident students; provided, however, that an alien who is living in this country under an immigration document permitting indefinite or permanent residence shall have the same privilege of qualifying for in-state tuition as a citizen of the United States.
6. Waivers: An institution may waive out-of-state tuition for:
 - (a) nonresident students who are financially dependent upon a parent, parents, or spouse who has been a legal resident of Georgia for at least twelve consecutive months immediately preceding the date of registration; provided, however, that such financial dependence shall have existed for at least twelve consecutive months immediately preceding the date of registration;
 - (b) international students, selected by the institutional president or his authorized representative, provided that the number of such waivers in effect does not exceed one percent of the equivalent full-time students enrolled at the institution in the fall semester immediately preceding the semester for which the out-of-state tuition is to be waived;
 - (c) full-time employees of the University System, their spouses, and their dependent children;
 - (d) medical and dental residents and medical and dental interns at the Medical College of Georgia;
 - (e) full-time teachers in the public schools of Georgia or in the programs

of the State Board of Technical and Adult Education and their dependent children. Teachers employed full-time on military bases in Georgia shall also qualify for this waiver;

(f) career consular officers and their dependents who are citizens of the foreign nation which their consular office represents, and who are stationed and living in Georgia under orders of their respective governments. This waiver shall apply only to those consular officers whose nations operate on the principle of educational reciprocity with the United States;

(g) military personnel and their dependents stationed in Georgia and on active duty unless such military personnel are assigned as students to System institutions for educational purposes;

(h) selected graduate students at University-level institutions;

(i) students who are legal residents of out-of-state counties bordering on Georgia counties in which an institution of the University System is located and who are enrolled in said institution.

7. A student is responsible for registering under the proper residency classification. A student classified as a nonresident who believes that he/she is entitled to be classified as a legal resident may petition the Registrar for a change in status. The petition must be filed no later than sixty (60) days after the semester begins in order for the student to be considered for reclassification for that semester. If the petition is granted, reclassification will not be retroactive to prior semesters. The necessary forms for this purpose are available in the Registrar's office.
8. Questions concerning classification for fee-payment purposes should be directed to one of the following persons:

Graduate applicants for admission:

Director of Graduate Admissions
534 Boyd Graduate Studies
Research Center

Currently enrolled students:

Assistant Registrar
105 Academic Building

Financial Assistance and Awards

More than 2,500 graduate students receive some form of financial assistance from the University. Persons holding an assistantship pay a reduced matriculation fee of only \$25 and a modest activity fee (currently \$298.50) each semester. Recipients of these awards must be fully admitted to the Graduate School in a degree-seeking status. For additional information and application procedures, contact the graduate coordinator of the department.

General University Awards

Graduate School Assistantships

The Graduate School each year selects university-wide graduate assistants from a list of highly qualified students who are nominated by their major departments. Each nominee is evaluated by a faculty panel in early March. Selections are based on the applicant's academic record, test scores, recommendations, and other pertinent information.

Predoctoral Assistantships

Predoctoral assistantships are awarded on a competitive basis to faculty members of Georgia colleges upon nomination by the president of the college in which they are teaching. The stipend is approximately \$12,300 per academic year. Recipients are expected to have no work obligation to their home institution and enroll for full-time graduate work. Nominations should be made to the Director of the Institute of Higher Education, The University of Georgia, by February 15 of each year.

Regents' Waivers of Out-of-State Tuition

The Graduate School awards out-of-state tuition waivers to students who are classified as non-residents of the State of Georgia. The awards are based upon applicants' academic records and the recommendations of their major departments. The waiver renews each semester contingent upon recipients earning at least a 3.50 graduate grade point average on nine hours of graduate course work. These awards waive only the non-resident portion of a student's tuition. Students interested in being nominated for this award should contact the graduate coordinator in their major department.

Regents' Opportunity Scholarships

The Regents' Opportunity Scholarships were established by the Georgia General Assembly in 1978 to assist certain economically disadvantaged students who have been accepted for admission as incoming graduate or professional students enrolled in institutions of the University System. Students must be residents of the State of Georgia. The scholarships are awarded in the amount of \$5,000 per year and are renewable. Students must maintain good academic standing and full-time status. Priority is given to renewals. Application must be made by April 1. Applicants should contact the dean of the appropriate academic college/school for additional information.

Departmental Assistantships and Awards

A variety of fellowships, scholarships, and assistantships are awarded by the various departments and divisions of the University. The amount of the award and the expected work required vary from department to department. Deadlines for submitting applications for departmental assistantships also vary among departments. Students holding graduate assistantships that require nine hours of work per week must register for a minimum of nine hours of course work to be eligible for the reduced matriculation fee. For information concerning these awards contact the appropriate department.

Teaching or Research Assistantships

These assistantships carry stipends ranging from \$3,500 to \$11,633 depending on the qualifications of the applicant, period of appointment, and the amount of work specified. Application should be made to the student's major department.

Academy of American Poets Prize

This award is given annually to a student in the Department of English whose poetry is deemed by a faculty committee to be outstanding. It is made as part of the University and College Prize Program, founded in 1955, established to encourage interest in poetry and writing among college students. At The University of Georgia, the prize is given in memory of Virginia R. Walter, an undergraduate English major from Savannah. The prize has a value of \$100.

School of Art Scholarships

Betty Cabin Scholarship. This scholarship is designated to assist a worthy student majoring in any program of the school. In most instances, it is awarded to an undergraduate, but in exceptional cases, it may be awarded to a graduate student.

Vince Dooley Scholarship. This scholarship is awarded to assist a worthy student majoring in any program of the school. In most instances, it is awarded to an undergraduate, but in exceptional cases, it may be awarded to a graduate student.

Mary Rosenblatt Graduate Award. This scholarship was established primarily to assist students who are planning a career in teaching; however, it is not limited to students majoring in art education.

Dorothy H. McRae Ceramic Arts Scholarship. The purpose is to provide scholarships to outstanding graduate students in the ceramic area based on excellence of work and academic record.

When sufficient earnings are available in any of the scholarship funds, the school may offer more than one award.

The Dolores E. Artau Scholarship in Romance Languages

Two awards of approximately \$1,000 are given annually to doctoral students enrolled in the Department of Romance Languages.

Kathryn S. Bigham Scholarship Fund

The purpose is to provide scholarship awards to graduate students and prospective graduate students with financial need. Special consideration will be given to international students.

Biological and Agricultural Engineering Graduate Assistantship Enhancement Award

The award is given to distinguished students who have demonstrated outstanding creativity and innovation, academic preparedness, and leadership in professional, extra-curricular and co-curricular activities. The award provides an enhancement to assistantship at \$100.00 or \$150.00 or \$250.00 per month starting on September 1 for a maximum period of twelve months. A recipient may be renominated for the following year. Nominations are due on August 1 to the Graduate Coordinator, Biological and Agricultural Engineering Department. Con-

tact the Graduate Coordinator for additional information at <gradprog@bae.uga.edu>.

The Alvin B. Biscoe Fellowship

This fellowship was established in 1967 by Mrs. Helen Biscoe in memory of her husband. Dr. Biscoe served as dean of the Terry College of Business from 1945 to 1949 and later as dean of Faculties of the University. This fellowship is awarded annually to two outstanding entering doctoral students in the Terry College of Business. Awards are based on scholastic achievements and professional potential.

Coral Jo Bishop Fellowship (The Little Red School House for Special Children, Inc.)

The purpose of this fund is to create the Coral Jo Bishop Fellowship, which shall be an annual fellowship to one or more students who are candidates for the Master of Education degree in the Department of Special Education, College of Education.

Teresa and Robert Blumberg Scholarship

This scholarship was established to recognize students for academic achievement and professional potential. The scholarship is awarded annually to an outstanding MBA assistantship recipient. The award is based on scholastic achievements and is a supplement to the assistantship stipend.

William K. Boardman Memorial Award

This award was established by Dr. Katherine B. Boardman in memory of her husband, who was Professor of Psychology. An outstanding advanced student in the Clinical Psychology Program is selected each year. The award includes a cash prize of \$100.

Ray E. Bruce Academic Support Fund

The purpose of this fund is to provide up to four \$250 study grants each year to students who are enrolled in the Specialist in Education program in the Department of Educational Leadership to support research activities related to the applied project. Awards are made by the department head, in consultation with other faculty, on the basis of academic excellence and the promise of the study making a significant contribution to the field of education. Further information concerning procedures for ap-

plication can be obtained from the Department of Educational Leadership.

Glenn and Helen Burton Feeding the Hungry Scholarship

The College of Family and Consumer Sciences offers this scholarship to doctoral students holding assistantships whose research involves human nutrition, or crop breeding for food or feed. The scholarship has a value of \$2,000.

James L. Carmon Scholarship

This scholarship honors the late Dr. James L. Carmon, who was assistant to the president of the university for computing activities and assistant vice chancellor for computing systems in the University System of Georgia. The Carmon Scholarship is awarded in the fall semester to a graduate student in the arts, humanities, or sciences whose thesis/dissertation research involves an innovative use of computers. The scholarship will provide a \$2,000 stipend for one academic year. Recipients of the award are eligible to apply in subsequent years. Only full-time graduate students in good standing at either the master's or doctoral level are eligible. The recipient must have completed three semesters of graduate school and have selected a thesis research project. Further information may be obtained by contacting the Office of the Vice President for Research, (706) 542-6512.

Elmer Jackson Carson Memorial Scholarship Fund

Through a gift from Mr. and Mrs. Charles Ferdinand Carson, Jr., an academic year scholarship will be awarded for graduate study in the area of reading education. The scholarship will be awarded each academic year in the amount of \$750. The award will be paid to the recipient at the beginning of each semester. A letter of application, including three (3) letters of recommendation from persons who can attest to the applicant's academic potential and commitment to reading education must be submitted to the department.

Department of Chemistry—Outstanding Teaching Assistant Awards

These awards are supported by a gift from Dr. Kenneth W. Whitten. \$1,000 is awarded to outstanding teaching assistants in the Department of Chemistry each year.

Department of Classics Summer Tuition Reductions and Scholarships for Latin Teachers

Limited scholarship assistance is available to Latin teachers enrolled in the department's Georgia Classics Summer Institute; in addition, teachers from out of state are awarded waivers reducing tuition for the Institute to the in-state level. Inquiries should be sent, no later than February 1, directly to the Department of Classics.

Jerome L. Clutter Memorial Fellowship

This fellowship was established in 1983 by the Clutter Family and the University of Georgia in memory of the late Dr. Jerome L. Clutter. The purpose of this fellowship is to encourage superior students to pursue a graduate program in forest biometrics or timber management. The stipend is \$5,000 for the academic year. Applications are available from the Office of the Associate Dean, School of Forest Resources, and must be received prior to July 1.

The Edward T. Comer Fellowships

The Comer Fellowships of \$2,000 are awarded on a competitive basis to new and current PhD students in business administration. Students are nominated by their departments for these non-service fellowships, and selection is based on merit.

Thomas F. Comer Scholarship

This scholarship is available to a master's degree student who will be offered an assistantship. Applicants must have been accepted in the College of Family and Consumer Sciences, have a minimum GPA of 3.0 and have a minimum GRE score of 1000. A written statement about the applicant's professional goals and the need for financial assistance to achieve them must accompany the application. The scholarship has a value of \$500.

Charles L. Darby Award

This award is given annually for excellence in instruction to the outstanding graduate teaching assistant in the Department of Psychology.

Maurice Doan Memorial Scholarship

The Maurice Doan Memorial Scholarship was established by friends and former students of the late Maurice Doan, a University of Georgia doctoral student in Risk Man-

agement and Insurance. Up to \$500 per year can be awarded to a current Insurance doctoral student who exhibits outstanding teaching abilities and concern for students.

Dowden Center for New Media Studies Doctoral Dissertation Grant

This program is open to any student currently enrolled in a doctoral program at an accredited university or college which requires a dissertation to complete degree requirements. The program will consider research proposals dealing with the economic, social, political, legal, business, or historical aspects of cable television and other related technologies. A \$500 award will be given to defray expenses incurred while doing dissertation research. Proposals must be received by May 15. Applications are available in the Director's Office, Dowden Center for New Media Studies, College of Journalism and Mass Communication.

A.S. Edwards Award

The student is chosen for excellence of scholarship, meritorious conduct, service to the Psychology Department, and future promise as a scholar. This award was established by the University of Georgia Chapter of Psi Chi to honor Austin Southwick Edwards, Head, Department of Psychology, 1916 to 1951. The award includes a cash prize of \$200.

Food Science and Technology Special Awards

In addition to normal graduate research and teaching assistantships, two graduate scholarships are available from the Department of Food Science and Technology. The Association of American Candy Technologists scholarship offers \$1,000-\$2,000 to students interested in a career in candy technology. Applications are due by April 1. The John J. Powers scholarships (\$1,000-\$2,000) are for food science graduate students displaying leadership character. These applications are due April 1. Exceptional graduate students also may apply through the department head for fellowships (\$1,000-\$10,000) from the Institute of Food Technologists.

Hazel and Gene Franklin Scholarships

Two scholarships are available: one for an undergraduate, one for a graduate. Appli-

cants must be registered in the College of Family and Consumer Sciences and have at least two semesters remaining in their degree programs. Evidence of academic excellence and professional commitment must be presented by the applicants. These scholarships have a value of \$500 each.

Gamma Iota Sigma Scholarships

Various members of the Georgia Insurance industry have contributed to the Gamma Iota Sigma Scholarship. Up to five \$600 scholarships are awarded each year. The risk management and insurance faculty, at its discretion, may supplement this scholarship for an additional \$400. The maximum award is \$1,000.

Genetics Predoctoral Training Grant, National Institutes of Health

These fellowships for graduate study in the area of genetics carry a stipend of \$11,496 for a twelve-month period and, in addition, include provisions for reimbursement of tuition and fees, certain travel expenses, and limited funds for research support. Application should be made to the Graduate Coordinator, Department of Genetics.

Georgia Bankers' Association Scholarship

This scholarship was established in 1978 by the Georgia Bankers' Association to recognize academic achievement and potential in a banking career. Students holding a master's level assistantship through the Terry College of Business and specializing in the field of banking and finance are invited to apply for the \$500 scholarship. Application should be made to the Director of Graduate Programs, Terry College of Business. Selection of recipients is made by a faculty committee.

Georgia Feed and Grain Association Graduate Fellowship in Animal Nutrition

This fellowship of \$2,000 is awarded annually to a U.S. citizen who is a graduate student in animal nutrition or in animal science, dairy science, poultry science, or crop and soil sciences. Funds for the award are provided by the Georgia Feed and Grain Association. This nonrenewable fellowship is in addition to and independent of any other financial support.

Georgia Review Editorial Assistantship

Awarded annually to an outstanding graduate in the Department of English, this nine-month assistantship pays a monthly stipend and includes a waiver of tuition. The assistant works with the staff of the Georgia Review and assists in various editorial duties. One third-time service is required, with a maximum course load each semester of nine hours. The competition for this award occurs each winter, and the winner is selected by the editor and staff of the Review.

O. William Gottlieb Scholarship

This scholarship was established by O. William Gottlieb to recognize academic achievement in business administration. The scholarship is awarded annually to an MBA assistantship recipient based on scholastic achievements.

Donald L. Grant Award

This award is given annually to the graduate student chosen for the outstanding master's thesis in the applied psychology program.

Department of History Awards

The Thomas Pleasant Vincent, Sr., Award. Up to \$1,500 for "distinguished students of history at the undergraduate or graduate level" with "an expressed interest in Georgia history." This award may be given to students in fields other U.S. history, but it does require an "expressed interest" in Georgia history.

The Warner-Fite Award. Up to \$1,200, limited to students in American history.

In some years, the Vincent, Sr., award and the Warner-Fite award may be divided among two recipients.

Carl Vipperman Awards for Outstanding Teaching Assistants. \$100 apiece (2 or 3 awards per year) for graduate teaching assistantships for outstanding performance in teaching undergraduates.

Nominations from the faculty for these awards are solicited in early May, the deadline for nominations are in late May, and awards are presented in early June. For further information, please contact the graduate coordinator in history at (706) 542-2053.

James D. Horne Scholarship Fund

The purpose is to provide a scholarship to an undergraduate or graduate student in the School of Social Work, selected by the dean and a funding committee, with preference

given, but not limited to a student whose major emphasis or practicum is the homeless.

Almonte Howell Fellowship Award

This award was established in memory of Almonte C. Howell, Jr., research professor of music, by his wife, Kathryn, and friends. Its purpose is to provide research support for outstanding and deserving graduate students in musicology. Nominations are initiated by the School of Music and the Almonte Howell Fellowship Committee. The value of the award is \$1,000.

Nancy Hailey Hunt and Mary Strickland Hailey Scholarship

This scholarship is available to a master's degree candidate in the College of Family and Consumer Sciences, who has a minimum of 18 semester hours remaining to complete the degree program. Preference will be given to applicants with an expressed financial need. This scholarship has a value of \$500.

Martha Jo Walker Johnson Memorial Fund

This fund was established in 1973 by Dr. Richard E. Johnson in memory of his wife. This fund is to provide one or more annual awards to graduate students majoring in social psychology who need financial assistance to complete research projects. Preference is to be given to female students, to be selected by a committee composed of the social psychology program faculty. The award includes a cash prize of \$250.

Wilbur P. Jones Scholarship

This scholarship in memory of Wilbur P. Jones is awarded yearly to one or more black students in the School of Social Work who have demonstrated academic excellence and need for financial assistance. Maximum award for a Master of Social Work student is \$750 during the first and/or sixth semesters of enrollment. Maximum award for a Bachelor of Social Work student is \$750 in either the junior or senior year of enrollment. Application should be made to Wilbur Jones Scholarship Committee, School of Social Work.

Rosabelle Carr Koelsche Scholarship

Two scholarships are open to both undergraduate and graduate students enrolled in

the College of Family and Consumer Sciences. Undergraduate applicants should have at least 60 hours of course work remaining in which to complete their program; graduate applicants should have a minimum of 18 hours remaining. These scholarships have a value of \$500.

Leisure Careers Foundation Scholarship/Loan Program

The Leisure Careers Foundation, a non-profit organization of the Georgia Recreation and Park Association, awards low interest loans to upperclass undergraduates and graduate students who are pursuing a degree in recreation and leisure studies. Repayment of the loan is cancelled if graduates become employed in Georgia in the field of parks or recreation within one year of graduation. Applications must be full-time students who are pursuing a degree in recreation and leisure studies. Application deadline is May 15. Contact the Department of Recreation and Leisure Studies for further information.

John Sanford Levy Memorial Award in Marine Geology

A fund was established in 1980 in memory of John Sanford Levy, an outstanding graduate student in marine geology, by his wife, Elizabeth, and by his parents, Dr. and Mrs. Alvin Thomas Levy. The income from this fund is used to support graduate students in the Department of Geology in the specific area of marine sciences. In recent years, individual awards have been as much as \$1,000. Application should be made to the Department of Geology, through the Marine Geology Committee.

Pauline Lide Scholarship

This fund, established in honor of a retired associate dean, is used to provide financial aid to needy and superior graduate students in the School of Social Work. Applications should be made to the dean of the School of Social Work.

H.O. Lund Scholarship

These funds are awarded to recognize excellence in academics and research in entomology. They may include financial enhancement awards.

Martha Love May Memorial Scholarship

This scholarship was established in 1986 by Professor Emeritus Jack T. May in memory of his wife. The stipend of \$1,500 is awarded annually to a female student in the School of Forest Resources. The student may be undergraduate or graduate and must have displayed outstanding scholarship in her chosen area of study. Applications must be received by March 1 in the Office of the Associate Dean of the School of Forest Resources.

Carroll Wade McGuffey Scholarship

The purpose of the fund is to provide a scholarship to be awarded to a doctoral student(s) in educational leadership, whose studies will include research into the impact of the school's physical environment on teacher behavior, pupil behavior and/or pupil learning. Further information concerning procedures for application can be obtained from the Department of Educational Leadership.

The Mekis Scholarship

The Mekis Scholarship is available to outstanding students who wish to pursue graduate study in political philosophy at The University of Georgia. The amount and frequency of the award depend upon the selection committee's judgment of the qualifications of candidates and upon the income produced annually by the Mekis bequest. The amount awarded most recently was \$1,000. It is expected that the Mekis Scholarship will be offered in conjunction with other fellowships or assistantships for which the recipient is competitive. For more information contact the Department of Political Science.

Microbiology Pre-Doctoral Research Training Grant National Science Foundation

Fellowships for graduate study in the area of microbiology carry a 12-month stipend of \$15,000 and include provisions for payment of tuition and fees and certain travel expenses. Only students of RTG faculty are eligible. Application should be made to the RTG Coordinator, Department of Microbiology.

David J. Mullen Scholarship

This scholarship fund was established by the family, friends, and students of Dr. David

J. Mullen, Sr. The purpose of the fund is to provide scholarship assistance to a doctoral candidate preparing for a public school position in the Department of Educational Leadership. This \$1,000 scholarship is non-renewable and is to be awarded during the year of writing the doctoral dissertation. Further information concerning eligibility and procedures for application can be obtained from the Department of Educational Leadership.

Gwendolyn Brooks O'Connell Scholarship

This award will be presented annually to a graduate student with outstanding performance who shows most promise in the instructional area. The candidates must be nominated from their departments and must have been enrolled in the College of Family and Consumer Sciences for at least one semester. The value of the award is \$500.

Robert E. Parks Essay Award

This award is given each year to a graduate student in English whose essay is selected by the department faculty as the most distinguished graduate essay of the academic year. The award carries a value of \$300.

Archie E. Patterson Scholarship Fund

This scholarship fund was established in 1987 by T&S Hardwoods, Inc., of Milledgeville, in honor of Professor Emeritus Archie E. Patterson. The award recognizes superior scholarship and is available to juniors, seniors, and graduate students enrolled in the School of Forest Resources. The stipend is for the amount of one year's in-state tuition. Applications must be received by March 1 in the Office of the Associate Dean of the School of Forest Resources.

Joe and Diane Perno Memorial Fund

This fund was established by the Perno family in memory of Joe and Diane Perno. The purpose of these awards is to recognize superior students in the School of Social Work. Awards include tuition supplements and research awards. Application should be made to the School of Social Work.

Perryco Fellowships

Perryco Fellowships are available for doctoral students in insurance. These awards are made by the Department of Insurance, Legal Studies, Real Estate and Manage-

ment Sciences and are available for incoming PhD students.

Phelps-Stokes Graduate Fellowship

The holder of this fellowship must pursue studies in one of the following departments: economics, education, history, political science, social work, or sociology. The recipient must make a scientific study of the role of blacks in American civilization. The value of this scholarship at present is \$1,500 a year. Application should be made to the student's major department in the university.

Emily Quinn Pou and Joe (J.W.) Pou Scholarship

This scholarship is open to undergraduate or graduate students currently enrolled in the College of Family and Consumer Sciences having at least two semesters remaining in their degree program. A minimum GPA of 3.0 is required for consideration. A written statement about the applicant's professional goals and how the scholarship may assist in the achievement of these goals must accompany the application. The value of the award is \$500.

Charles M. Rose Scholarship

Watt Publishing Company sponsors a scholarship in the name of Mr. Charles M. Rose. This scholarship is made annually to a graduate or undergraduate student in poultry science. Selection is based on scholarship, professional and extracurricular activities, and departmental and university service. The stipend is \$1,000 each year.

Robert A. Sheldon Scholarship

This award is made yearly to a student in the Institute of Ecology for graduate student summer research. The stipend is approximately \$750 each year. Application should be made to the head of the Institute of Ecology.

Gene M. Simons Fellowship Award

The purpose of the fund is to provide fellowship and research support to outstanding and deserving graduate students whose major field of study is music education. Preference will be given to graduate students whose professional and research interests lie in one or more of the following areas: (a) music in early childhood, (b) research in early childhood music; and (c) choral music education. Nominations are initiated by the

School of Music faculty and the Gene M. Simmons Fellowship Committee.

Martin Reynolds Smith Fund

By the gift of \$2,000, Mr. J. Warren Smith established this fund in memory of his son, Martin Reynolds Smith. The interest from this investment is to be used as prizes for excellence in research in chemistry. Applications should be directed to the head of the Department of Chemistry

Charles D. Smock Memorial Award

This award is given annually to the most promising senior graduate student in the Developmental Psychology Program.

Mary Ella Lunday Soule Award

A memorial fund was established in 1979 to honor Mary Ella Lunday Soule, who was head of the Women's Physical Education Department from 1925 to 1960. These funds are awarded to outstanding women students enrolled in the Department of Physical Education and Sport Studies based upon scholastic achievement and professional contributions. Monetary awards are given each year to an undergraduate student, to a master's student, and to a doctoral student.

Tull Teaching Assistantships

Recipients are responsible for teaching accounting principles courses each semester. Guidance is provided by the School of Accounting faculty. The stipend is \$4,500. Recipients must be enrolled for a minimum of eight hours.

Robert H. West Scholarship

This award is presented annually to an outstanding student working towards a graduate degree in English. It is given in memory of the late Dr. Robert H. West, a member of the department from 1936 to 1974, and department head from 1962 to 1972. The award is made by the faculty of the Department of English.

Karin E. Willis Scholarship

This scholarship is open to both undergraduate and graduate students enrolled in the College of Family and Consumer Sciences. Applicants must have a minimum GPA of 2.75 and the scholarship is renewable. Preference will be given to student athletes, including cheerleaders and twirlers. The value of the award is \$500.

Heather Christina Wright Memorial Scholarship Fund

This School of Social Work scholarship fund was established by family and friends in memory of Heather Christina Wright. The purpose of these awards is to recognize students who exemplify the character and enthusiastic spirit of Heather and the desire to dedicate their lives to serving and helping cancer patients and their families.

Florene M. Young Award

Two students are chosen who best represent the ideals of Dr. Florene M. Young. The award process emphasizes both clear merit in the applied science of clinical psychology as well as a strong commitment to helping others. The award was established in 1989 by the clinical psychology program, the Department of Psychology, and the many admirers of Dr. Young in recognition of her pivotal role in establishing a nationally recognized, empirically oriented clinical psychology program at the University of Georgia. Each award includes a cash prize of \$300.

The Herbert Zimmer Scholar Awards

Each year an outstanding third- or fourth-year graduate student in each area of specialization in the Department of Psychology is selected to receive a Herbert Zimmer Scholar in Psychology Award. These awards recognize outstanding potential for research and include a cash prize of \$100.

Graduate Research Facilities

Centers and Institutes

Artificial Intelligence Center

Director: Dr. Donald Nute, (706) 542-0358. The Artificial Intelligence Center is a multidisciplinary group dedicated to basic and applied artificial intelligence research, especially in knowledge representation, expert systems, natural language processing, neural nets, and genetic algorithms. The Center currently administers a master of science program in artificial intelligence. Fellows include faculty from the Franklin College of Arts and Sciences, the Terry College of Business, the College of Agricultural and Environmental Sciences, and the College of Education. The Center has addi-

tional Fellows from institutions in North America, Europe, and Australia. Visiting appointments are available to researchers with sabbatical or other support. The Center has a Worldwide Web page at www.ai.uga.edu. For further information, contact the Director, Artificial Intelligence Center, 111 Boyd Graduate Studies Research Center, The University of Georgia, Athens, GA 30602-7415 (dnute@ai.uga.edu). For information about the graduate program, contact Dr. Walter D. Potter at the same address (potter@pollux.cs.uga.edu) or Angie Paul (aspaul@uga.cc.uga.edu).

Center for Advanced Ultrastructural Research

Director: Dr. Mark A. Farmer, (706) 542-4080.

The Center for Advanced Ultrastructural Research serves the University System by providing a repository of facilities and expertise to assist in pursuing research and instructional needs employing light, fluorescence, and electron microscopy. Facilities include two TEMs, a Field Emission SEM, two confocal microscopes, X-ray microanalysis, and image processing and analysis workstations. Formal courses in microscopy are offered through the Division of Biological Sciences.

Center for Applied Cognitive Research on Aging

Director: Dr. Denise C. Park, (734) 936-2121.

The Center for Applied Cognitive Research on Aging is one of the six Edward R. Roybal Centers for Research on Applied Gerontology funded by the National Institute on Aging. The centers are aimed at keeping people independent, active, and productive in later life. The Center is a consortium of the University of Michigan, the University of Georgia and Georgia Institute of Technology. Research at the Center involves studying the ways in which mental skills, such as problem solving, memory, attention, and perception, can change and be enhanced as people grow older. Current topics of study include: improving techniques for helping the elderly to remember to take medication; developing training programs for computers that are "elder friendly"; and defining principles for age-related teaching methods that can be applied to many tasks of daily living.

Center for Applied Isotope Studies

Director: Dr. John E. Noakes, (706) 542-1395.

The Center for Applied Isotope Studies is a multidisciplinary self-supporting research facility focusing on the application of nuclear analytical technology to critical contemporary problems. An emphasis is placed on innovative applied research, including the development of improved methods for low-level and ultra low-level measurement of radioisotopes, a stable isotope program for food/flavor and hydrologic research, an aquatic survey program for environmental and mineral resource applications, development of remote sensing systems for environmental monitoring, development of transgenic fish species for environmental assessment applications, and a geohydrology research program. One of the highest priorities of the CAIS is to direct its efforts toward environmental problems and issues with the application of these new analytical methods and technologies. The CAIS also provides analytical services on a fee basis, including radiocarbon dating, stable isotope measurements, trace element determinations, ⁶⁰Co gamma irradiation of samples, and low-level detection of tritium and other radionuclides for environmental monitoring and assessment. The CAIS plays a strong support role on the UGA campus, assisting academic departments, research units, and individuals with problems related to instrumentation, methods, and techniques in isotopic analysis. Offices and laboratories are located at 120 Riverbend Road in the CAIS Building.

Center for Archaeological Sciences

Director: Dr. George A. Brook, (706) 542-2354.

The Center for Archaeological Sciences promotes research between the humanities archaeology, anthropology, and art history and the sciences geology, geography, geochemistry, chemistry, and biology. The Center coordinates the research of university scholars in fields relating to archaeology and art history, facilitates collaboration with experts outside the university, serves as a resource center of laboratory equipment and technical support for archaeologists, art historians, and museums worldwide, and coordinates interdisciplinary undergraduate and graduate degree programs in the archaeological sciences.

Center for Asian Studies

Co-Directors: Dr. Thomas Ganschow, (706) 542-2053, and Dr. Shanta Ratnayaka, (706) 542-5356.

The Center for Asian Studies exists to nurture and guide academic programs and exchanges on Asia for students, faculty, and appropriate staff members. While these programs focus on language and area studies, they also involve students and faculty from law, business, agriculture, education, journalism, veterinary medicine, as well as the arts and sciences. Specific purposes and programs focus on (1) curriculum planning, review, and development in modern Asian languages and related area studies; (2) a speakers' and visitors' program of distinguished Asianists to address and exchange ideas with students, faculty, and community on Asian topics; (3) student and faculty exchange agreements such as the ones recently concluded with Kansai Gaidai and Yokohama University in Japan and the established one at Kagoshima University in Japan; (4) development of library and related instructional and research facilities necessary for a credible academic program in Asian studies; (5) planning and application for external funding for Asian Studies at UGA; and (6) research and research collaboration on East Asia. A certificate program in East Asian Studies based on concentration in either Chinese or Japanese is available for graduate students and is administered jointly by CAS and the Center for Global Policy Studies.

Center for Biological Resource Recovery

Director: Dr. Lars G. Ljungdahl, (706) 542-7640.

The Center for Biological Resource Recovery is comprised of investigators from the departments of biochemistry and molecular biology, botany, microbiology, and marine sciences at the university and from the Richard B. Russell Agricultural Research Center. The Center puts special emphasis on the use of enzymes and microorganisms in the pulp and paper industry and in agriculture, but it is also committed to extending the biotechnology required for the use of microorganisms and their enzymes as inexpensive and energy-efficient catalysts for converting our main renewable resource, biomass to desired products, such as fuel and industrial feedstock chemicals. Studies

include the physiology, biochemistry, genetics and ecology of bacteria and fungi that are important for biotechnological industries.

Center for Computational Quantum Chemistry

Director: Dr. Henry F. Schaefer III, (706) 542-2067.

The Center for Computational Quantum Chemistry seeks to develop theoretical and computational methods through mathematical models for describing and understanding the movement and function of electrons in molecules and to apply the theoretical methods to significant problems of broad chemical interest. Some of the theoretical methods under development include the configuration interaction, coupled cluster, and Brueckner methods and associated analytic gradient techniques. Additional theoretical work involves density functional theory, the evaluation of electron repulsion integrals, and the treatment of relativistic effects. Currently applications to several areas of chemistry are of special concern: (1) the potential energy hypersurfaces that govern elementary gas phase chemical reactions, including systems pertinent to combustion; (2) fundamental problems in physical organic chemistry involving, for example, carbenes and other biradical species and systems such as the [n] paracyclophanes and [10] annulene; (3) organosilicon chemistry, specifically the prediction and understanding of the properties of silicon analogs of both common and unknown hydrocarbon compounds; (4) hydrogen bonding in systems as complicated as the guanine-cytosine base pair; and (5) the study of molecular ions and ion clusters pertinent to atmospheric chemistry.

Center for International Trade and Security

Director: Dr. Gary K. Bertsch, (706) 542-2985.

Center for International Trade and Security (CITS) (formerly the Center for East-West Trade Policy) is an interdisciplinary and inter-university research, teaching, and service project designed to contribute to enlightened trade and security policies. CITS strives to produce policy-relevant research on political, economic, and security issues related to international trade and technology transfer. The center encourages and

coordinates collaborative research, teaching, and service-related activities within the university, the state, the nation, and overseas. CITS currently directs international research projects on trade and security issues in the new independent states of the former Soviet Union and in Asia.

Center for Latin American and Caribbean Studies

Director: Dr. Overton Brent Berlin, (706) 542-1452.

The Center coordinates interdisciplinary research, curriculum offerings, and public programs which deal with Latin America and the Caribbean. Through colloquia, conferences, small travel grants for students and faculty, and an undergraduate certificate program, the Center brings together researchers currently engaged in work in Latin America from all colleges and schools of the university.

Center for Metalloenzyme Studies

Co-Directors: Dr. Michael K. Johnson (706) 542-9378; Dr. Michael W. Adams, (706) 542-2060.

The Center for Metalloenzyme Studies was established to encourage interdisciplinary research to determine the roles of metals in biological systems and how metalloproteins are synthesized and regulated. Through collaborative research, discussions, and seminars, new insights are obtained concerning enzymes that catalyze life-supporting processes such as nitrogen fixation, respiration, photosynthesis, sulfur conversions, and hydrogen production. Use of the latest technologies and analytical equipment enables faculty of the center and its postdoctoral and graduate students to investigate the catalytic mechanisms of metalloenzymes at the molecular level. The center faculty organize state-of-the-art courses in inorganic biochemistry, biochemistry, enzymology, fermentation technology, as applied to metalloprotein production, structure, and function.

Center for Remote Sensing and Mapping Science

Director: Dr. Roy A. Welch, (706) 542-2359. The Center for Remote Sensing and Mapping Science (CRMS) undertakes research and training in the fields of remote sensing, geographic information systems (GIS), photogrammetry, digital image processing, and

computer graphics, particularly as applied to the physical and biological sciences. Typical research topics include quantitative methodologies for measuring soil erosion from agricultural lands by photogrammetric techniques, mapping environmental disturbances from aerial photographs and satellite images, development of integrated image processing/GIS software and advanced technologies for monitoring the earth's surface from digital image data. Close associations are maintained with remote sensing organizations and scientists in Canada, Europe, South America, and Asia. The CRMS provides technical assistance to universities and to local, state, and federal agencies.

Center for Simulational Physics

Director: Dr. David Landau, (706) 542-2909. The Center for Simulational Physics functions as a center for research and training in simulational physics, with emphasis on the use of supercomputers and novel parallel architectures. Because of this work, close interaction with the University Computing and Networking Services is maintained, and collaborative research programs with major institutions in the United States and Europe are developed. The center's staff consists of research and adjunct professors, visiting research scientists, and postdoctoral associates.

Complex Carbohydrate Research Center

220 Riverbend Road; Tel.: (706) 542-4401; Fax: (706) 542-4412. Internet: <http://www.ccrcc.uga.edu>.

Co-Directors: Dr. Peter Albersheim, (706) 542-4404; Dr. Alan Darvill, (706) 542-4411. The Complex Carbohydrate Research Center (CCRC), which includes a U.S. Department of Energy-funded Center for Plant and Microbial Complex Carbohydrates and a National Institutes of Health Resource Center for Biomedical Complex Carbohydrates, studies the structures and functions of the complex carbohydrates of plants, microbes, and animals to determine the role of carbohydrates in growth and development, host-pathogen interactions, and disease processes. The CCRC's 68,000 sq. ft. building is specifically designed for the interdisciplinary and equipment-intensive nature of carbohydrate science. Scientists at the CCRC investigate the chemistry and the physiological, developmental, and molecu-

lar biology of complex carbohydrates having biological importance using advanced analytical techniques, including mass spectrometry, nuclear magnetic resonance (NMR) spectroscopy, computer modeling, artificial neural networks, tissue culture, monoclonal antibodies, and recombinant genetics. The CCRC provides analytical services to scientists, conducts four annual extramural hands-on laboratory training courses, and develops computer software to assist the study of complex carbohydrates. MS and PhD students in the Departments of Biochemistry and Molecular Biology, Botany, and Chemistry can apply to conduct their graduate research under the direction of a CCRC faculty member. The Complex Carbohydrate Structure Database and its search program, CarbBank, were written and developed by CCRC scientists under the direction of an international executive board. The database is available on the internet in a Windows95/NT format, currently contains more than 49,000 records, and is updated continuously. CCRC personnel are presently engaged in more than 115 collaborations with scientists in North and South America, Europe, and Japan.

James M. Cox, Jr., Center for International Mass Communication Training and Research

Director: Dr. Lee B. Becker, (706) 542-5023. The James M. Cox, Jr., Center for International Mass Communication Training and Research serves to facilitate international mass communication training and research programs in which scholars from the United States and foreign countries, students, and mass communication professionals can cooperate. The center helps to coordinate efforts to improve the state of knowledge in the field and to encourage practical training, education, and service projects.

Housing and Demographics Research Center

Co-Directors: Dr. Anne L. Sweaney and Mr. Robert J. Cleveland, (706) 542-4877. The Housing and Demographics Research Center (HDRC) provides sound housing research, promotes a more rational regulatory environment for the building community, and disseminates research findings to policy-makers, interested parties, and the general public. The HDRC was created in partnership with the Research Center of the

National Association of Home Builders and was officially recognized as a center in June of 1996. It is part of a network of housing research centers located regionally at major research universities. The faculty have garnered support from the Athens-Clarke County Government, Department of Community Affairs, Georgia Department of Human Resources, Georgia Department of Transportation, the National Association of Housing Counselors and Agencies, Inc., and SMART House Limited Partnership, Inc., among others.

Institute for Behavioral Research

Director: Dr. Rex L. Forehand, (706) 542-1806.

The Institute for Behavioral Research is a multidisciplinary research organization, the purpose of which is to encourage a pooling of the expertise of staff members and graduate students from various departments to attack significant social and behavioral problems at both basic and applied levels.

Staff members are assembled from a variety of departments from the College of Arts and Sciences, College of Education, College of Family and Consumer Sciences, and the School of Social Work. Staff members hold faculty rank in their respective departments and have a joint appointment in the Institute. Many hold research grants or contacts, and research assistants are appointed to further these and other ongoing research efforts. Current activities include research on the family, cognition, and deviance. IBR serves as an "umbrella" for several enterprises: the Survey Research Center, the Center for Research on Deviance and Behavioral Health, and the Center for Family Research. In addition, there is a Cognitive Studies Group and a Models and Methods Group.

The Institute is housed in Barrow Hall, with ready access to the University Computer Center, a technical library, and related facilities.

The Institute does not confer degrees; however, students interested in the Institute's activities may correspond with the graduate coordinator of any department collaborating with the Institute or with the Director, Institute for Behavioral Research, The University of Georgia, Athens, Georgia 30602-2401.

Institute of Ecology

Director: Dr. C. Ronald Carroll, (706) 542-2968.

The Institute of Ecology was founded in 1961 to promote interdisciplinary research in ecology. The Institute currently administers a master's and doctoral program in ecology and an interdisciplinary master of science program in conservation ecology and sustainable development. A core administrative, technical, and professional staff is supported by state funds. Most of the support for the large research projects and for graduate and post-doctoral students working on these projects comes from grants.

In addition to the faculty of the Institute, a larger affiliated membership represents many academic disciplines, coming from at least 20 University departments or schools. Besides these academic units, members are on the staffs of the Institute of Community and Area Development, the Institute of Government, the Savannah River Ecology Laboratory, and the Marine Science Program. Ecologists from the U.S. Forest Service and U.S. Environmental Protection Agency, who closely interact with Institute scientists, are also members.

The Institute has a long-standing and highly productive research and training relationship with the Savannah River Ecology Laboratory in Aiken, SC, and the U.S. Forest Service's Coweeta Hydrological Laboratory in Franklin, NC. The Institute also has research and academic relationships with the Joseph W. Jones Ecological Research Center in southwest Georgia. Additional field studies are also underway at Cumberland Island National Seashore, Sapelo Island, the Ogeechee River, the McGarity Wetlands, the Coastal Plains Experiment Station, Horsehoe Bend, and the Florida Keys; international field research sites include Costa Rica, Ecuador, Guatemala, Puerto Rico, the Philippines, and Burkina Faso. The Institute supports research in marine and freshwater ecology, radiation ecology, ecological toxicology, evolutionary ecology, conservation biology, landscape ecology, restoration ecology, agroecosystem ecology, and resource management. Graduate students participate in various Institute research projects. Their research usually contributes to their thesis or dissertation.

A special graduate student research program is offered through the University's Sa-

vannah River Ecology Laboratory (SREL). Funded by the U.S. Department of Energy, the laboratory is located on DOE's 250,000-acre Savannah River site. The site contains a variety of natural and disturbed habitats. Research is jointly supervised by the student's university research committee and SREL. Stipends are available. A pre-doctoral fellowship program is also available. All participants in SREL's educational program must be U.S. citizens.

Several researchers at the Jones Center hold faculty appointments in the Institute. For students working with these faculty, agreements to share student stipend costs have been made.

For additional information on the Institute of Ecology, contact Dr. C. Ronald Carroll, Institute of Ecology, The University of Georgia, Athens, Georgia 30602-2202. For additional information on the degree programs in ecology, contact Ms. Patsy Pittman, Ecology Program, Ecology Building, The University of Georgia, Athens, Georgia 30602-2202. Persons interested in SREL programs should contact Ms. Jannell Gregory, SREL, Drawer E, Aiken, South Carolina 29802.

Institute of Higher Education

Director: Dr. Cameron Fincher, (706) 542-3464.

The Institute of Higher Education is an instruction, service, and research agency of the University of Georgia and works closely with other educational agencies and institutions in cooperative programs dealing with planning, development, and evaluation. The Institute is involved in many activities related to the overall development of higher education and the improvement of institutions and programs. Staff members participate in statewide, regional, and national studies of institutional goals, program development, instructional improvement, and the professional development of administrators and faculty members. One important function of the Institute is assisting other institutions in projects related to the improvement of administrative, faculty, and student services. Another function includes cooperation with the Graduate School in helping faculty members of Georgia colleges continue their graduate education and to improve their teaching skills. As part of its efforts to analyze and interpret conceptual and operational trends in higher education,

the Institute conducts numerous workshops, seminars, and conferences on the campuses of other institutions. Closely related to all Institute activities is a doctoral program specifically designed to study education beyond the high school. Inquiries should be addressed to the Director, Institute of Higher Education, Candler Hall, The University of Georgia, Athens, Georgia 30602-1772.

Institute for Natural Products Research

Director: Dr. S. William Pelletier, (706) 542-5800.

The Institute for Natural Products Research carries out a broad range of research on naturally occurring substances of plant origin, with particular attention to plant species of Georgia and the Southeast. Projects involve research on alkaloids, terpenes, antitumor agents, phytoalexins; the development of new synthetic methods; and the application of modern spectroscopic methods to structure elucidation problems. Research involves the isolation and elucidation of chemical structures of new compounds possibly useful as drugs for the treatment of human disease. The institute serves as a training center for visiting faculty and for postdoctorate and graduate students who are working in natural products research.

Marine Facilities

Two units of the University of Georgia's School of Marine Programs, the Marine Extension Service and the Marine Institute on Sapelo Island operate extensive coastal facilities available for research and training in marine sciences. In addition, the School of Marine Programs' Department of Marine Sciences operates two freshwater research and educational facilities, one on Clarks Hill Lake at Mistletoe State Park and the other in the Okefenokee Swamp in collaboration with the Okefenokee National Wildlife Refuge.

The Marine Extension Service's education center and shellfish research laboratory are on Skidaway Island, near Savannah. The education center houses a 10,000-gallon teaching aquarium, educational exhibits, lecture rooms, four teaching laboratories, and two research laboratories. A 50-bed dormitory and dining room facility operate in support of the marine education program. The shellfish research laboratory has seawater and tank systems to hold brood stock,

constant-temperature rooms to control spawning, and illuminated temperature-controlled chambers for maintaining stock algal cultures and mass algal culture systems. A modern, solar-efficient greenhouse was added in 1989 to produce algae. The Skidaway branch of the UGA Science Library occupies 6100 sq ft and has holdings of 18,000 volumes and 200 marine-related journal subscriptions. The Seadawg, a 47-ft converted lobster boat, makes about 300 short cruises a year in support of the education and research programs.

Other Marine Extension Service facilities include a fisheries research station on the waterfront in Brunswick. The 15,000-sq-ft Center for Fisheries Research was recently augmented with conference rooms and flexible space for conducting seminars and short courses, as well as additional laboratories for research addressing the problems of seafood processors and harvesters. The 73-ft research vessel, Georgia Bulldog, is based at the Center and used for gear research and marine biological sampling purposes.

The University of Georgia Marine Institute is located on Sapelo Island in a setting of diverse natural marine habitats. The Institute is a valuable resource, both in terms of research on the estuarine and nearshore environment and in implementing the training of students. Additional financial support is provided by the Sapelo Foundation, a private, charitable, nonprofit organization founded by the late Mr. R. J. Reynolds.

The Institute's resident staff consists of about 10 scientists, who hold appointments as adjunct professors in the Department of Marine Sciences, as well as a number of technical and support personnel. Members of the campus faculty and students, as well as scientists and students from other institutions, are in periodic residence at the Institute. Field trips and graduate research by campus-based groups are encouraged. Current research programs include energy flow, nutrient cycling, and factors regulating the metabolism of the salt marsh and nearshore ecosystems.

In 1976, under the Coastal Zone Management Act of 1972, the nation's second estuarine sanctuary was established encompassing the southern portion of Sapelo Island, the Duplin River, and adjacent wetlands and surrounding areas. The primary purpose of the sanctuary was to provide a natural area so

that ecological relationships can be studied over the long term. The sanctuary is now known as the Sapelo Island National Estuarine Research Reserve and is managed by the Georgia Department of Natural Resources and funded by the National Oceanic and Atmospheric Administration.

In addition to the School of Marine Programs' coastal facilities, all of which are available for student research and training, the Department of Marine Sciences also maintains extensive research and instructional laboratory facilities on the main campus in Athens. These are equipped to conduct research on a wide range of marine-related physical, biological, chemical, and geological topics as well as on marine and coastal law and policy.

The department recently established an aquatic instructional and research station 90 minutes from Athens at Clarks Hill Lake, a large reservoir on the Savannah River near Augusta. The station has a 1000 sq. ft. instructional activities building, and is home base for small boats as well as the 39 ft. research vessel Underdog, used to train students in marine and aquatic measurements and sampling techniques.

The Department of Marine Sciences maintains laboratory, office, and limited dormitory space in a modern modular building at the Okefenokee National Wildlife Refuge near Folkston, GA. The facility is operated in collaboration with the U.S. Fisheries and Wildlife Service and provides access to a wide range of open water, marsh, swamp, and upland wilderness habitats in the Okefenokee Swamp Ecosystem.

The Skidaway Institute of Oceanography, located on Skidaway Island, was established in 1967 and operates as a unit of the University System of Georgia. The Institute does not grant degrees, but cooperative programs with other institutions make it possible to conduct graduate research in marine sciences at the Institute under the direction of campus or Institute staff. Skidaway Institute faculty hold adjunct professorships with the University of Georgia's Department of Marine Sciences.

McPhaul Child and Family Development Center

Curriculum Coordinator: Dr. Lily Paguio, (706) 542-4929.

The McPhaul Child and Family Development Center provides developmentally ap-

propriate programs for both university and community families with children 6 months to 5 years. Both half- and full-day programs are available. Half-day programs are for infants, toddlers, two- and three-year old children as well as four-year old children in the Head Start program. Full-day programs exist for three- and for four-year-old children in a state-funded Pre-Kindergarten classroom. Children with a disability are served throughout the Center. The purpose of the center's programs are: (1) to provide training opportunities for university students in the Department of Child and Family Development as well as other academic units to observe and interact with young children and their families; (2) to conduct research on the development of children and families and ways to optimize their development; and (3) to provide a quality developmental program for young children and to channel other resources of the College of Family and Consumer Sciences to families.

Poultry Diagnostic and Research Center

Director: Dr. Stanley H. Kleven, (706) 542-5644.

The Department of Avian Medicine carries out basic and applied research programs on the diseases which are of economic importance to the poultry industry of Georgia. Diagnostic, laboratory, and consultative services are provided to individuals and groups in all phases of poultry production.

Dean Rusk Center for International and Comparative Law

Director: Professor Thomas J. Schoenbaum, (706) 542-5140.

The Dean Rusk Center for International and Comparative Law was founded in 1977 as part of the School of Law to improve the effectiveness of relations among citizens, private sector entities, and government at the local, state, federal, and international levels. Using advanced electronic information-processing techniques, the center's professional staff and part-time researchers mobilize university, business, and governmental resources to develop theoretical and practical approaches to improve the efficiency of governance, trade, and investment. On occasion the center also helps implement the approaches by providing the private and public sectors with essential manpower and information. In the past the Dean Rusk Center has developed several

major initiatives for federal action concerning North American cooperation and overseas trade regulation and representation. It also has analyzed new approaches for expanding Georgia agricultural exports. The center publishes research reports, holds conferences, and sponsors research for Georgia citizens that cover fiscal and monetary policy, international arrangements, and domestic affairs.

Torrance Center for Creative Studies

Director: Dr. Juanita Matthews-Morgan, (706) 542-5104.; e-mail: nitamm@arches.uga.edu; or www.coe.uga.edu/edpsych/docs1/gifted/docs1/torrance.html.

The mission of the Torrance Center for Creative Studies is to promote scholarly inquiry into the study, development and evaluation of gifted and creative abilities in individuals from diverse age-groups, cultures, and economic backgrounds. Center activities are primarily designed to facilitate the completion of practica and internship requirements by graduate students majoring in gifted and creative education. To signify completion of practicum and internship requirements, graduate students develop portfolios that contain records of the balanced set of experiences they have had in teaching, basic and applied research, and outreach. University of Georgia faculty, both inside and outside the Department of Educational Psychology and other local, state, regional, national, and international scholars are also involved in the research, instructional, and outreach (service) activities promoted through the Center. These activities include the Challenge Programs, the Future Problem Solving Program, and the E. Paul Torrance Lecture.

The Center maintains a comprehensive data base of information on giftedness, creativity, and futures studies from three major sources: (a) the clients who participate in Center programs and activities; (b) the work of Gifted and Creative Education faculty; and (c) the work of Dr. E. Paul Torrance, a pioneer in research on creativity, giftedness, and futures studies, and the person for whom the Center is named.

Research Organizations

Oak Ridge Associated Universities

Since 1948, students and faculty of the University of Georgia have benefited from its

membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility that ORAU manages, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the Resource Guide, which is available at the world-wide web at <http://www.oraugov/orise/resgd/htm>, or by calling either of the contacts below.

ORAU's Office of Higher Education Initiatives seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Junior Faculty Enhancement Awards and the Visiting Industrial Scientist Program, and various services to chief research officers.

For more information about ORAU and its programs, contact Mr. Kirk D. Bertram, ORAU Council member, at (706) 542-3184; contact Monnie E. Champion, ORAU Corporate Secretary, at (423) 576-3306; or the ORAU home page at <http://www.oraugov>.

Organization for Tropical Studies

The Organization for Tropical Studies (OTS), a nonprofit scientific and educational corporation, was formed in 1963 by a group

of educational institutions that have a long history of interest in developing tropical science. The fifty-six member institutions, which include Universidad de Costa Rica, University of California, University of Connecticut, Duke University, University of Florida, The University of Georgia, Harvard University, University of Hawaii, Indiana University, University of Kansas, Louisiana State University, University of Miami, University of Michigan, Michigan State University, University of Missouri, North Carolina State University, University of Ohio, Stanford University, Smithsonian Institution, University of South Carolina, Texas Technological College, University of Washington, and University of Wisconsin, are dedicated to the purpose of developing a sound educational and research program with adequate facilities and support to provide the base support for a massive effort in solving problems in tropical science. Initial emphasis was placed on biological sciences and closely allied fields, but activities have been expanded gradually to include other fields in which study may be most effectively carried out in the tropics.

The initial objectives of the OTS are:

1. to provide a sound formal educational base in tropical biology available to all interested students and scientists in the Americas;
2. to contribute to the education of students and scientists by providing basic background and facilities for tropical research;
3. to develop an educational center that will provide fundamental insight into the principles of tropical biology;
4. to develop an educational center that will provide an intellectual resource in science for the hemisphere; and
5. to stimulate and assist programs of education and research throughout the tropics, primarily through the education of competent tropical scientists.

To implement these objectives, OTS has established an educational center for tropical studies in Costa Rica. Central headsemesters are in San Jose in association with the campus of the Universidad de Costa Rica, but the entire republic serves as a classroom and laboratory. Establishment of a network of field stations in appropriate tropical habitats where classes may meet continuously from one to several weeks is an integral feature of OTS planning. OTS is committed to the concept

that in order to solve the problems of tropical education and meet the goals of the organization it is necessary to maintain a continuing program of course work presented in a rigorous and organized manner. Coordinated with the course program must also be a program of research to ensure maximum intellectual challenge.

Enrollment in OTS courses is based on national competition, with graduate students and recent postdoctoral faculty selected on the basis of academic record and interest in tropical studies. Descriptions of regularly presented courses and their prerequisites are given under listings in biology, forestry, and geography.

The University of Georgia Tropical Studies Group, with about 50 members in 19 departments, sponsors seminars and workshops on the campus in support of the OTS field program. Membership is open to graduate students and faculty.

Interested persons should contact Dr. Cathy Pringle, Institute of Ecology, or Dr. James L. Hamrick, Department of Botany, who serve on behalf of the University as members of the OTS Board of Directors.

Veterinary Medical Experiment Station

Director: Dr. Harry W. Dickerson, (706) 542-5734.

The Veterinary Medical Experiment Station coordinates and conducts research on disease problems of food- and fiber-producing animals, including poultry and fish. Companion animals, horses, and wildlife are included. The research programs, which have applied, basic, and comparative medical orientation, are divided broadly into four main categories: infectious diseases, noninfectious diseases, diagnostic techniques, and therapeutic procedures. Research facilities are located within the College of Veterinary Medicine at Athens, in the Poultry Diagnostic and Research Center at Athens, and in the Veterinary Diagnostic Laboratories at Athens and Tifton. Opportunities for graduate training in the biomedical sciences are provided by the station's research programs.

Libraries

University Librarian: Dr. William Gray Potter, (706) 542-0621.

The University of Georgia Libraries are composed of three major on-campus libraries the Main Library, Science Library

and the Law Library administered by the School of Law. There are several small collections such as those at the Curriculum Materials Center (Education), the Georgia Center for Continuing Education Library, the Veterinary Medicine reading room, and various Lab collections. The UGA Libraries' system also includes libraries at the experiment stations in Griffin and Tifton and the marine stations at Sapelo and Skidaway.

The UGA Library is the largest library in the State of Georgia and serves as the Regional Depository for federal government publications for the state of Georgia. It is a member of the prestigious Association of Research Libraries, consisting of the largest research libraries in North America and ranks in the top thirty of these libraries.

The libraries contain more than 3.4 million books, serials, and documents, plus many other items including manuscripts, photographs, drawings, music scores, audio/video materials, and newspapers. The map collection incorporates over 590,000 items, and the microform collection numbers more than 5.6 million. The collections support the instructional, research, and public service activities of the university and are available to library users both on the campus and across the state.

An outstanding feature of the Main Library is the Hargrett Rare Book and Manuscript Library, a repository of rare and priceless relics. Among the special collections are the works and memorabilia of Erskine Caldwell and Margaret Mitchell, the original Confederate Constitution, Confederate imprints, a notable Georgiana collection, many Southern historical manuscripts, and the sheet music of many well-known musicians.

The Richard B. Russell Library for Political Research and Studies, an annex to the Main Library, houses the papers and memorabilia of the late Senator Russell, as well as the papers of former Secretary of State Dean Rusk, Senator Herman E. Talmadge, and many other elected officials and government appointees. The archives of the Peabody Award house over 30,000 radio and television programs representing the best in broadcasting.

The University Libraries offer a variety of electronic databases for use by the campus community. In addition to the main catalog, the online system GALIN supports an electronic encyclopedia and indexes to the jour-

nal literature of a number of disciplines. GALIN is readily available in the Libraries, across the campus network, or through dial access. Other databases are available through LIBRA, a Novell based file server that is connected to the campus network. Statistical databases are available through the Data Services unit on the 6th floor of the Main Library. Many government produced databases can be found in the Government Documents Department in the Main Library. Additional databases are available through Galileo, a statewide electronic library service.

More than 460,000 volumes are housed in the University's Law Library. It has a complete collection of American legal resources and one of the finest foreign and international collections in the country.

Special services of particular interest for graduate students include tours of the libraries and orientation to their services and collections; individual reference conferences for persons undertaking a major research paper, thesis, or dissertation; and access to information in over 200 computer databases through searching done either by the user or with assistance by librarians.

For additional information on Libraries collections and services, contact the Office of the Director, Libraries, The University of Georgia, Athens, Georgia 30602-1641, (706) 542-0621.

Museums

The Georgia Museum of Art

Director: Dr. William U. Eiland, (706) 542-4662.

The Georgia Museum of Art, founded by Alfred H. Holbrook in 1948, serves the university, the community, and the state. In recognition of the museum's statewide significance and growing national prominence, the Georgia General Assembly designated it the official State Museum of Art in 1982. The permanent collection of the museum now numbers over 7,000 works, with primary emphasis on 19th- and early 20th-century American art. The building is located in the Performing and Visual Arts Complex. Works in the collection and curatorial files are available for study by students and scholars. An active publications program includes a semesterly museum newsletter and catalogues for selected exhibitions organized by the museum. The museum features highlights of its permanent

collection and major traveling exhibitions as well as temporary exhibitions of other works from its collection. Lectures, gallery talks, films, family days, and other events are scheduled to complement these exhibitions. The Museum Shop offers a variety of books, cards, and arts-related gifts.

The University of Georgia Museum of Natural History

Acting Director: Dr. Elizabeth J. Reitz, (706) 542-1663.

The University of Georgia Museum of Natural History, which contains the most extensive collection of Georgia natural history artifacts and specimens, is one of the largest natural history museums in the Southeast. It ranks within the top 50 in the nation in terms of the size of its collections and the scope of its research and technical service programs. The museum comprises eight separate collection areas: Archaeology Collection (3.5 million artifacts), Botany Herbarium (200,000 plant specimens), Entomology Collections (500,000+ pinned insects, 100,000 alcohol-preserved insects, and the world's largest collection of ectoparasitic feather mites over 6,000,000), Geology Collections (10,000 economic geology ore specimens, 10,000 mineral specimens, and 10,000 invertebrate and vertebrate fossils), Julian H. Miller Mycological Herbarium (25,000 fungi), Plant Microfossil Laboratory (a worldwide collection of fossil pollen samples), Zooarchaeology Collection (4,800 comparative reference skeletons), and Zoological Collections (250,000 vertebrates, 10,000 invertebrates, and 5,000 corals).

The Museum's collections are crucial to quality education in over 30 specialized graduate and undergraduate courses in the natural sciences at the University. Moreover, the educational role of the Museum extends well beyond the campus. Each year the Museum provides loans of educational materials and access to its collections to other institutions and the individuals within the University System, regional primary and secondary schools, and various state agencies. Also, through specialized educational programs, lecture series, and short courses, the Museum reaches thousands of individuals and groups throughout Georgia each year.

The State Botanical Garden of Georgia

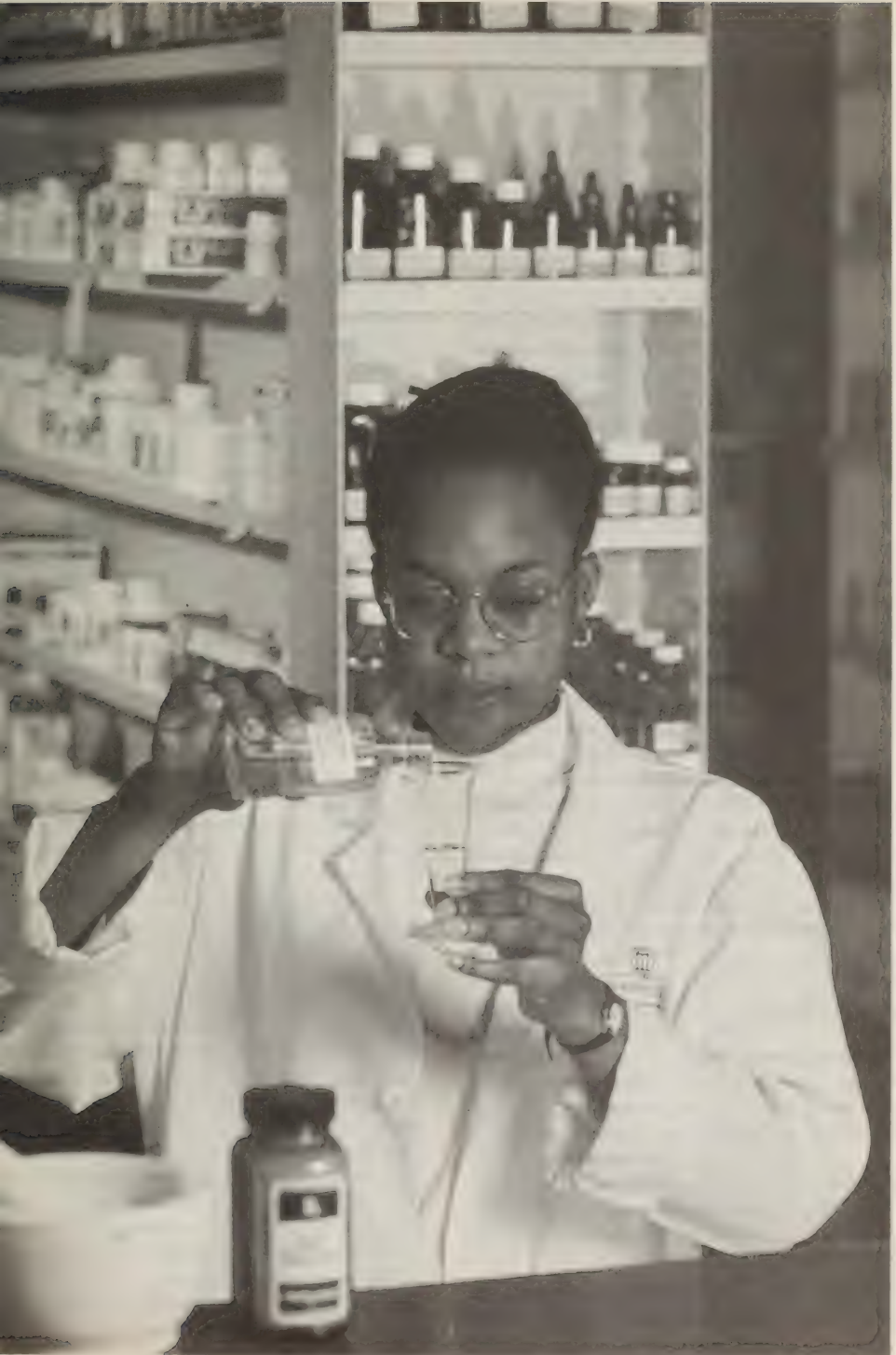
Director: Dr. A. Jefferson Lewis, III, (706) 542-1244.

The State Botanical Garden is a public educational facility under the auspices of the University of Georgia. Its mission is to acquire and disseminate botanical knowledge and to foster appreciation, understanding, and stewardship of plants and nature through research, educational programs, plant collections, and horticultural displays. The Garden is located two miles south of campus. Founded in 1968, it now encompasses more than 300 acres, much of which borders the Middle Oconee River. The Garden features a number of specialty Gardens and collections plus five miles of nature trails. The modern Visitor Center/Conservatory features a permanent display of tropical and semitropical plants along with classrooms, a gift shop, cafe, and other visitor facilities. The adjacent International Garden includes an herb and physic garden, a bog garden, a collection of endangered plants of the southeastern United States, as well as representative species from the floras of the Mediterranean region, Latin America, China, and the southeastern states. The nearly 2,500 types of plants in the accessioned collections are about equally divided between species and cultivated varieties.

The Garden is a living laboratory for university teaching and research. Students and faculty utilize the collections and natural plant communities for studies in a variety of disciplines, including plant reproductive biology, vegetation analysis, ecosystem studies, plant pathology, animal behavior, taxonomy, plant physiology, horticultural trails, museum studies, and anthropology. Conservation programs at the Garden focus on rare and endangered species of Georgia and adjacent states. The Garden is a member of the American Association of Botanical Gardens and Arboreta (AABGA) and Botanic Gardens Conservation International (BGCI), the latter a worldwide network of botanical gardens and arboreta committed to conservation education and research. A computerized geographic information system (GIS) is under development to facilitate and promote research activities. Students and faculty are encouraged to contact the Director of Research at (706) 542-6144 for further information concerning academic use of the Garden facilities.



General Degrees



General Degrees

Master of Arts (MA) and Master of Science (MS)

Master of Arts

The Master of Arts degree will be conferred upon candidates who have met the requirements of this degree with major study in one of the following fields: anthropology, art history, business administration, classics, comparative literature, economics, education, English, French, geography, German, Greek, history, journalism, Latin, linguistics, mathematics, mathematics non-thesis, music, philosophy, political science, religion, Romance languages, sociology, Spanish, and speech communication.

Master of Science

The Master of Science degree will be conferred upon candidates who have met prescribed requirements, with major study in one of the following fields: agricultural economics; agricultural engineering; agronomy; anatomy (veterinary); animal science; artificial intelligence; biochemistry and molecular biology; biological engineering; botany; cellular biology; chemistry; child and family development; computer science; conservation ecology and sustainable development; dairy science; ecology; entomology; environmental economics; environmental health; food science; foods and nutrition; forest resources; genetics; geology; horticulture; housing and consumer economics; marine sciences, medical microbiology; microbiology; pharmacology (veterinary); pharmacy; physics; physiology (veterinary); plant pathology; poultry science; psychology; statistics; textiles, merchandising, and interiors; toxicology; veterinary parasitology; and veterinary pathology.

Requirements

1. *Admission.* An applicant may be admitted as a prospective candidate for the Master

of Arts or Master of Science degree upon recommendation of the major department and approval of the dean of the Graduate School.

2. *Residence.* The minimum residence requirement is one academic year (two semesters of full-time study).

3. *Time Limit.* All requirements for the degree must be completed within six years beginning with the first registration for graduate courses on the program of study. An extension of time may be granted only for conditions beyond the control of the individual.

4. *Research Skills Requirements.* Upon the option of the student's major department, a reading knowledge of a modern foreign language or other research skills may be required of a candidate for the Master of Arts or the Master of Science degrees. A prospective student should request information concerning the research skills requirements from the departmental graduate coordinator if the requirements are not described under the departmental heading in this bulletin.

5. *Advisory Committee.* Before the end of the first semester of residence and upon the recommendation of the departmental graduate coordinator, the dean of the Graduate School shall appoint an advisory committee for the student. The committee will consist of a major professor, as chairman, and two additional members. The major professor and at least one of the other members of the committee must be members or provisional members of the graduate faculty. Only faculty members of the rank of assistant professor or above, or the equivalent, are permitted to serve as committee members. The committee will be recommended to the dean of the Graduate School by the graduate coordinator after consultation with the student and faculty members involved.

The advisory committee, in consultation with the student, is charged with planning

the student's program of study. It is also charged with approving the program of study, reading and approving the thesis, and administering the final examination.

6. *Program of Study.* A student must complete a program of study which constitutes a logical whole. Master of Arts and Master of Science degrees require a minimum of 30 semester hours consisting of at least 24 hours of course work and 6 hours of thesis and related research. Of the 24 hours of course work, at least one-half of this credit must be in University of Georgia courses open only to graduate students. The requirement of at least 12 semester hours of credit open only to graduate students may not be reduced by credit in 7000 (Master's Research). A maximum of six semester hours of 7000 may be included on the program of study.

The program of study must be submitted on the proper form with approval by the student's major professor, the departmental graduate coordinator, and the dean of the Graduate School. This step should be completed during the student's second semester of residence and must be done before the student is admitted to candidacy for a degree.

7. *Acceptance of Credit by Transfer.* If graduate credit earned at an accredited institution constitutes a logical part of the student's program, transfer of credit may be allowed when recommended by the student's major professor and graduate coordinator, and when approved by the dean of the Graduate School. Such transfer of credit cannot exceed six semester hours and must fall within the time limit of the degree. No grade below B may be transferred. The courses to be transferred may not have been used in a degree program at another institution. Transfer grades are not used in calculating cumulative averages. All requests for transfer credit, with accompanying official transcripts, must be in the Graduate School at least 30 days prior to the time the student plans to graduate.

8. *Admission to Candidacy.* The student is responsible for initiating an application for admission to candidacy so that it is filed with the dean of the Graduate School by Friday of the first full week of classes of the semester in which the courses on the program of study are completed. This application is a certification by the student's major department that the student has demonstrated the

ability to do acceptable graduate work in his or her field and that:

- (1) all prerequisites set as a condition to admission have been satisfactorily completed;
- (2) research skills requirements, if applicable, have been met;
- (3) the program of study has been approved by the major professor, the graduate coordinator, and the dean of the Graduate School; and
- (4) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed courses on the program of study (no course with a grade below C may be placed on the program of study).

9. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

10. *Thesis.* A candidate must submit a thesis which shows independent judgment in developing a problem from primary sources. (In the Departments of Mathematics and Statistics, the thesis requirement may be replaced by nine semester hours of graduate work in 8000-level courses.) The thesis shall be written under the direction of the student's major professor. The thesis must be approved by the major professor, who will distribute copies to the remaining members of the advisory committee and schedule a final examination. Written assent of two of the three committee members will be required before a thesis will be approved as ready for a final defense.

The thesis, signed by the major professor, must be submitted to the dean of the Graduate School for his approval no later than two weeks prior to graduation.

A candidate must register for at least three semester hours of thesis under the course number 7300. Instructions for typing the thesis may be obtained in the Graduate School.

Once a student has been admitted to candidacy, the department has an ethical responsibility to ensure that appropriate faculty mentorship is provided to the candidate for completion of the degree.

11. *Final Examination.* A final examination on both the program of study and the thesis is required of all Master of Arts and Master of Science candidates. That part of the examination dealing with the program of study may be written or oral; that part concerned

with the thesis must be an oral examination. The final examination will be administered by the advisory committee, with the major professor serving as chairman. All members of the advisory committee must be present.

12. *Binding the Thesis.* Three copies of the thesis must be deposited with the University Library for binding. Each copy must carry a certificate of approval signed by the major professor and the dean of the Graduate School.

13. *Final Clearance.* All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. A student must enroll for a minimum of three hours of credit the semester in which he/ she completes degree requirements.

Doctor of Philosophy (PhD)

The University established this degree for the purpose of providing properly qualified students with the opportunity to pursue research and other scholarly activities beyond the point that is possible in programs for the master's degree. At present, opportunity for such advanced graduate work is provided in adult education, agricultural economics, agronomy, animal and dairy science, animal nutrition, anthropology, art, biochemistry and molecular biology, biological and agricultural engineering, botany, business administration, cellular biology, chemistry, child and family development, communication sciences and disorders, comparative literature, computer science, counseling and student personnel services, counseling psychology, drama, ecology, economics, educational psychology, English, entomology, exercise science, food science, foods and nutrition, forest resources, genetics, geography, geology, health promotion and behavior, higher education, history, horticulture, housing and consumer economics, instructional technology, language education, linguistics, marine sciences, mass communication, mathematics, mathematics education, medical microbiology, microbiology, middle school education, music, pharmacology (veterinary), pharmacy, philosophy, physical education, physics, physiology (veterinary), plant pathology, political science, poultry science, psychology, reading education, Romance languages, science education, social science education, social work, sociology, special education,

speech communication, statistics, textile sciences, toxicology, veterinary parasitology, and veterinary pathology.

This degree will be granted in recognition of proficiency in research, breadth and soundness of scholarship, and thorough acquaintance with a specific field of knowledge, not upon completion of any definite amount of work prescribed in advance. Evidence of such attainment must be provided through the presentation of an acceptable dissertation based upon independent research and the passing of such written and oral examinations as may be prescribed.

Departments that have been approved to offer the Doctor of Philosophy degree may implement this degree program by the adoption of appropriate rules and regulations. Departmental rules and regulations may not, however, conflict with the policies, rules, and regulations of the Graduate School.

Requirements

1. *Admission.* An applicant may be admitted as a prospective candidate for the Doctor of Philosophy degree upon certification by the major department that he or she is a person of proper attainment and promise, that appropriate courses may be adequately given, and that the student's research can be adequately supported and directed. Such admission must be to an authorized field and must be approved by the dean of the Graduate School.

2. *Residence.* The granting of this degree presupposes a minimum of three full years of study beyond the bachelor's degree. At least two consecutive semesters of full-time work (i.e., enrollment for a minimum of 30 hours of consecutive course work included on the program of study) must be spent in resident study on this campus. Undergraduate courses taken either to fulfill research skills requirements or to remove deficiencies may not be calculated in the 30 consecutive hours of resident credit.

3. *Time Limit.* All requirements for this degree, except the dissertation and final oral examination, must be completed within a period of six years. This time requirement dates from the first registration for graduate courses on a student's program of study.

A candidate for the doctoral degree who fails to complete all degree requirements within five years after passing the compre-

hensive examination, and being admitted to candidacy, will be required to take the comprehensive examinations again and be admitted to candidacy a second time.*

4. *Research Skills Requirements.* To pursue research effectively a student must develop a facility with certain research skills or tools such as statistics, computer science, or foreign languages. The student's major department determines the skill or skills required of candidates for the Doctor of Philosophy degree. A prospective student should request information concerning research skills requirements from the departmental graduate coordinator if the requirements are not described under the departmental heading in this bulletin.

5. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

6. *Advisory Committee.* Before the end of the first year of residence of a prospective candidate for the Doctor of Philosophy degree and upon the recommendation of the departmental graduate coordinator, the dean of the Graduate School shall appoint an advisory committee for the student. The committee will consist of a major professor, as chairman, and four additional members. The major professor and at least two of the other members of the committee must be appointed members of the graduate faculty. The committee will be recommended to the dean of the Graduate School by the graduate coordinator after consultation with the student and faculty members involved.

The advisory committee, in consultation with the student, is charged with planning the student's program of study. It is also charged with approving the program of study, arranging the comprehensive written and oral examinations, approving a subject for the dissertation, and approving the student's defense of his or her research. The committee should advise the student of required research skills and other requirements.

Departmental recommendations for the advisory committee, and any replacements, shall be determined by procedures approved by a majority of the graduate faculty of that department.

7. *Programs of Study.* A preliminary program of study, developed by the major professor and the doctoral student and approved by a majority of the advisory com-

mittee, will be submitted to the graduate coordinator by the end of the student's first year of residence. The program of study should constitute a logical whole and consist primarily of 8000- and 9000-level courses in addition to research and independent study.

A final program of study will be submitted to the Graduate School prior to application for admission to candidacy. This program of study must be submitted on the proper form for approval by the advisory committee, the graduate coordinator, and the dean of the Graduate School. The final program of study must show all graduate courses relevant to the doctoral program (including courses from the master's degree and courses transferred from other universities), and not just courses satisfying the minimum degree requirement. A minimum of three hours of 9300, doctoral dissertation, must be included on the program of study.

Each department should evaluate carefully and fully each doctoral student's progress and qualifications at the end of the first year of study in order to advise the student whether or not to continue in the program.

8. *Comprehensive Examinations.* A student must pass formal, comprehensive written and oral examinations before being admitted to candidacy for the degree. These examinations are administered by the student's advisory committee.

The written comprehensive examination, although administered by the advisory committee, may be prepared and graded according to the procedures and policies in effect in the student's department. The oral comprehensive examination will be an inclusive examination within the student's field of study. An examination of the student's dissertation prospectus may precede or follow the oral comprehensive examination but may not take the place of the oral comprehensive examination. All members of the student's advisory committee must be present for the entire period of both oral examinations.

The oral comprehensive examination is open to all members of the faculty and shall be announced by the Graduate School. The graduate coordinator must notify the Graduate School of the time and place of this examination at least two weeks before the date of the examination. This notice must be in writing.

Following each examination, written and oral, each member of the advisory committee will cast a written vote of pass or fail on the examination. At least four out of a possible five positive votes are required to pass each examination. The results of both examinations will be reported to the Graduate School.

9. *Admission to Candidacy.* The student is responsible for initiating an application for admission to candidacy so that it is filed with the dean of the Graduate School at least two semesters before the date of graduation. This application is a certification by the student's major department that the student has demonstrated ability to do acceptable graduate work in the chosen field of study and that:

- (1) all prerequisites set as a condition to admission have been satisfactorily completed;
- (2) research skills requirements, if applicable, have been met;
- (3) the final program of study has been approved by the advisory committee, the graduate coordinator, and the dean of the Graduate School;
- (4) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed graduate courses on the program of study (no course with a grade below C may be placed on the final program of study);
- (5) written and oral comprehensive examinations have been passed and reported to the Graduate School;
- (6) the advisory committee, including any necessary changes in the membership, is confirmed and all its members have been notified of the appointment; and
- (7) the residence requirement has been met.

After admission to candidacy, a student must register for at least two additional semesters and a total minimum of ten hours of dissertation or other appropriate credit. A student must register for a minimum of three hours of credit in any semester when using University facilities and/or staff time.

Once a student has been admitted to candidacy, the department has an ethical responsibility to ensure that appropriate faculty mentorship is provided to the candidate for completion of the degree.

10. *Dissertation Planning.* A student pursuing this degree must present a dissertation on some subject connected with his or

her major field of study. The dissertation must represent originality in research, independent thinking, scholarly ability, and technical mastery of a field of study. The conclusions must be logical, the literary form must be acceptable, and the contribution to knowledge merit publication.

Persons who serve on the advisory committee at the time the dissertation research is undertaken must be faculty members knowledgeable in the areas of the student's research. They should be selected irrespective of their departmental affiliation. Sometimes membership of the advisory committee will remain unchanged during a student's entire doctoral program, while at other times changes in the original committee will be necessary.

The major professor has the primary responsibility for guiding research, but the student should consult all members of the advisory committee to draw upon their expertise in relevant areas.

The major professor and advisory committee shall guide the student in planning the dissertation. The student will prepare a dissertation prospectus. When the major professor certifies that the dissertation prospectus is satisfactory, it must be formally considered by the advisory committee in a meeting with the student. This formal consideration may not take the place of the comprehensive oral examination.

Approval of the dissertation prospectus signifies that members of the advisory committee believe that it proposes a satisfactory research study. Approval of the prospectus requires the agreement of at least four of the five members of the advisory committee as evidenced by their signing an appropriate form, which, together with the approved prospectus, is filed with the graduate coordinator.

11. *Dissertation Approval and Defense.* When the major professor is satisfied with the completed dissertation, he or she will certify that it has his or her approval and is ready to be read. The major professor will then distribute copies of the dissertation to the remaining members of the advisory committee, schedule a final oral defense, and notify the Graduate School. Subsequently, the Graduate School will announce the time and place of the defense of the dissertation to the University community. The committee members will have three weeks to read and evaluate the completed dissertation.

Written assent of three of the four committee members (other than the major professor) will be required before a dissertation will be approved as ready for a final defense. If the advisory committee declines to approve the dissertation as ready for the final defense, the major professor will notify the student and the Graduate School.

The defense of the dissertation will be chaired by the student's major professor and attended by all members of the advisory committee. Four of the five members of the advisory committee must approve the student's dissertation and defense and must certify their approval in writing. The results of the defense of the dissertation must be reported to the Graduate School at least one week prior to graduation.

Once the dissertation has been approved by the advisory committee and the final oral examination has been passed, the dissertation must be submitted to the Graduate School for final approval no later than the last day of classes of the following semester. Dissertations which are not submitted by this deadline must be defended again and approved by the Advisory Committee before they will be considered by the Graduate School for final approval.

12. *Binding the Dissertation.* Three official copies of the dissertation must be filed in the University Library for binding. Each copy must carry a certificate of approval signed by the major professor and the dean of the Graduate School.

13. *Other Requirements.* Before the degree will be awarded, the student must file a copy of the abstract of the dissertation (not more than 350 words) with the Graduate School and the library. At the same time, the student must submit a receipt showing that he or she has deposited with the treasurer of the University the amount of \$50 to cover the cost of microfilming the dissertation. If the student desires to have the dissertation copyrighted, an additional charge of \$35 must be paid. This fee must be presented at the University Library in the form of a certified check or money order made payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. A student must enroll for a minimum of three hours of credit the semester in which graduation requirements are completed.

Interdisciplinary Program

Toxicology

Cham E. Dallas, *Director and Chair of Coordinating Committee*

Raghubir Sharma, *Graduate Coordinator,*
542-2788

(Veterinary Medicine Building)

The Toxicology Program is an interdisciplinary program designed to train students to assume positions as toxicologists in academia, industry and government. The faculty participants come from a number of fields of study to which persons may apply for admission. These include ecology, environmental health science, foods and nutrition, forest resources, medical microbiology, medicinal chemistry, pathology, pharmaceuticals, pharmacology and toxicology, physiology and pharmacology, and poultry science. The Toxicology Faculty cooperate both in graduate training and in collaborative research. Thus, graduate students interact with scientists from different disciplines and have the opportunity to specialize in one of a number of areas.

Toxicology is the study of harmful effects of chemicals on humans and other living organisms. It is inherently a broad, multi-disciplinary field requiring expertise in a number of biological sciences. In recognition of this breadth, the program has two parallel tracks: (a) human and animal toxicology; and (b) environmental toxicology. The focus of each track is different, but there is overlap of prerequisites and core course requirements. Courses listed under a number of departments are available for the program. Prerequisite courses for the human and animal track include biochemistry, physiology and pathology. Prerequisites for the environmental track include biochemistry, environmental chemistry, and population and ecosystem ecology. Principles of toxicology, chemical toxicology, and graduate seminar are required courses for both tracks. Other core courses for the environmental track are aquatic toxicology and quantitative ecological toxicology. Two organ systems toxicology courses are required for the human and animal track. Students may select from a variety of electives according to their own interests and program of study.

Graduate students may obtain a Master of Science or Doctor of Philosophy, with a

major in toxicology. Individuals can initially contact the Graduate Coordinator of the Interdisciplinary Graduate Program in Toxicology for information. Visits will be set up with faculty working in a person's area(s) of interest. Applications for admission should be made to the home department of the faculty member with whom the applicant wants to work. The student is assisted in selecting a program of study and research topic by an advisory committee chaired by the major professor. Each student must pass a written and an oral qualifying examination. After being admitted to candidacy, a thesis or dissertation must be completed. The successful candidate who majors in toxicology will receive a master's or doctorate degree through the home department of his/her major professor.

Professional Degrees



Professional Degrees

Master's Degrees

General Requirements

Listed below are the general requirements governing professional master's degree programs. For policies pertaining to the Master of Laws (LLM) degree, which deviate from these general requirements, see the LLM program description.

1. *Admission.* An applicant may be admitted as a prospective candidate for a professional degree upon the recommendation of the major department and approval of the dean of the Graduate School.

2. *Residence.* The minimum residence requirement for most professional master's degrees is two semesters, which do not have to be consecutive. See the following program descriptions for specific requirements.

3. *Time Limit.* All requirements for a professional master's degree must be completed within six years beginning with the first registration for courses on the student's program of study. An extension of time may be granted only on conditions beyond the control of the student.

4. *Language Requirement.* A candidate for a professional master's degree is required to show correctness and good taste in the use of both written and spoken English.

5. *Program of Study.* A program of study should be prepared by the student and the major professor by the beginning of the student's second semester in residence. This program must be submitted to the Graduate School on application for admission to candidacy forms and must be approved by the major professor, the graduate coordinator, and the dean of the Graduate School.

6. *In-Service Credit.* A maximum of 18 hours of graduate in-service course credit taken at non-resident centers may be included in certain programs. This maximum will be reduced by any credit transferred from another institution. A student is re-

sponsible for contacting the department in which he or she is enrolled to ascertain if in-service courses are acceptable on the program of study.

7. *Accepting Credit by Transfer.* Graduate work taken at an accredited institution which constitutes a logical part of a student's program of study may be transferred if recommended by the student's major professor and graduate coordinator and approved by the dean of the Graduate School. Such transfer of credit cannot exceed six semester hours, cannot reduce residence requirements, and must fall within the time limit of the degree. No grade below B may be transferred. The courses to be transferred may not have been used as part of the requirements for another degree. Transfer grades are not used in calculating semesterly and cumulative averages. All requests for transfer credit, with accompanying official transcripts, must be in the Graduate School at least 30 days prior to the date the student plans to graduate. A combination of in-service and transfer credit may not exceed 18 semester hours on any program of study.

8. *Admission to Candidacy.* It is the responsibility of the student to see that an application for admission to candidacy is filed with the dean of the Graduate School by Friday of the first full week of classes of the semester in which the courses on the program of study are to be completed. This application is a certification by the student's major department that the student has demonstrated the ability to do acceptable graduate work and that normal progress had been made toward earning a degree. The student's major professor and graduate coordinator must certify that the following specific requirements for admission to candidacy have been met:

- (1) all prerequisites set as a condition to admission have been completed;
- (2) the program of study has been approved by the major professor, the

graduate coordinator, and the dean of the Graduate School;

- (3) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed courses on the program of study (no course with a grade below C may be placed on the program of study).

9. *Thesis.* If a thesis is required for a professional master's degree, inquiry should be made to the appropriate department concerning procedures to be followed.

10. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

11. *Final Examination.* The candidate must pass a final examination administered by the department. If an oral examination is given, it must be administered by a committee of no fewer than three faculty members. The results of this examination must be reported to the Graduate School by the major professor. This requirement has been waived for degrees offered in the Terry College of Business.

12. *Registration Requirement.* A student must be registered at the University of Georgia for a minimum of three hours of credit the semester in which all degree requirements are completed.

13. *Final Clearance.* All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation.

Program Descriptions

Master of Accountancy (MAcc)

Applications for both the MAcc and the Five-Year Program are reviewed on basis of accounting gpa, overall gpa, GMAT scores, TOEFL scores if applicable, and letters of recommendation. Request an application/information packet for the latest statement on the minimum requirements to be considered for admission. There are two graduate accounting programs: the Master of Accountancy (MAcc) and the Five-Year Program (BBA/MAcc). Each evaluates students based on a review of accounting grades, overall grades, test scores, letters of recommendation and other factors that indicate success in the accounting profession. The graduate course requirements for both programs are the same.

The MAcc program is a standard, post-

baccalaureate degree. Students must have completed an undergraduate degree from an accredited institution before enrolling in the MAcc program. Students applying for admission to the MAcc program are expected to complete a foundation of business and accounting courses.

The Five-Year Program allows outstanding UGA accounting students to begin Graduate School during their fourth (senior) year. Students complete their final two years of study as graduate students and hence may be considered for a graduate assistantship during their enrollment. Five-Year Program students may also be eligible for support through the HOPE Scholarship. Please contact the Program Coordinator for details.

Based on a student's intended area of specialization, the MAcc program consists of the following courses beyond the basic accounting and business prerequisites. Guidance is provided by the school regarding specific prerequisites and requirements.

Audit, Systems, or Managerial Track

- ACCT 7030 Advanced Financial I
- ACCT 7410 Tax II
- ACCT 7740 Accounting Policy & Research
- ACCT 8100 Cost II **or** ACCT 8200 Audit/Systems III
- Six hours from: ACCT 8050 Financial Statement Analysis and ACCT 8100 Cost II **or** ACCT 8200 Audit/Systems III ACCT 8800 Internship (maximum of 6 hours)
- Four MBA Electives as determined by the chosen track.

Tax Track

- ACCT 7030 Advanced Financial I
- ACCT 7420 Partnership Tax
- ACCT 7430 Estate & Gift Tax
- ACCT 7440 Corporate Tax I
- ACCT 7730 Tax Policy & Research
- Six hours from **either:** ACCT 8440 Corporate Tax II **and** 3 hours from: ACCT 8200 Audit/Systems III ACCT 8050 Financial Statement Analysis ACCT 8100 Cost II **or:** ACCT 8800 Internship (maximum of 6 hours)
- Three MBA Electives as determined for the tax track.

Master of Agricultural Economics (MAE)

This degree is designed for students who wish to acquire specialized training in agribusiness. The program blends business and economics with the applied science of agriculture, providing methods for solving real-world problems. An internship and technical report are required in lieu of a thesis.

Master of Agricultural Extension (MAExt)

This degree is designed especially for cooperative extension workers, agricultural educators, and other continuing educational professionals engaged in informal educational settings. In addition to general Graduate School requirements, a baccalaureate degree appropriate to one's work and one year of field experience in cooperative extension, or its equivalent, is desired before a prospective candidate may begin the program. Candidates must complete an approved program of 36 semester hours of graduate work.

A master's report or thesis is required. The content of the problem or analysis must relate to needs within the field of extension education.

Master of Applied Mathematical Science (MAMS)

The Master of Applied Mathematical Science is a terminal degree program designed for students who seek a broad training in applied quantitative methods as preparation for professional employment in business, government, or industry. For such students, this program will provide a structure that blends various applied mathematical sciences with particular reference to their application to real-world problems.

The program of study includes 30 semester credit hours of graduate courses. In lieu of a thesis, students in the program are required to prepare a technical report. The preparation of the technical report will provide the student with an opportunity to apply the tools of the mathematical sciences to one or several problems of interest, by developing appropriate models, obtaining needed data, and analyzing the results for their decision implications. The technical report must be filed with the student's department.

Four distinct options, at four different lo-

cations on campus, are available to accommodate students with different career goals. A student may apply for MAMS study with concentrations in: (1) applied mathematics in the Department of Mathematics, (2) quantitative methods in business in the Management Science Program in the Terry College of Business, (3) statistical analysis in the Department of Statistics, (4) or computer science in the Department of Computer Science. All candidates for the degree must satisfy as prerequisites one year of calculus, a course in linear algebra, an introductory course in statistical methods, and one in computer programming. Additional prerequisites are required for some options. If the student has not completed all prerequisites, he or she must complete them early in the program. Courses taken to meet prerequisites may be graduate or undergraduate courses, but may not be applied to the program of study for the degree.

Master of Art Education (MAEd)

The Master of Art Education degree is designed for art teachers and supervisors of art with course work in curriculum, instructional methodology, and educational research along with theoretical, historical, and psychological foundations of art in education. Students may select courses in studio, art history, aesthetics, and criticism as part of their program. The program requires 33 semester hours of course work, including ARED 7650, Applied Project in Art Education. Prerequisite for admission is a bachelor's degree in art or art education. (See MEd degree description for details.)

Master of Arts for Teachers (MAT)

The Master of Arts for Teachers program is designed to prepare teachers for employment in secondary schools and junior colleges. The degree may be earned in English, French, German, Romance languages, and Spanish. There is no thesis or language requirement.

In general, admission requirements for programs leading to the Master of Arts for Teachers degree are the same as admission requirements for programs leading to the Master of Arts degree. Applicants should contact the department in which they plan to enroll for information concerning admission to specific programs. In addition to depart-

mental admission requirements, all applicants for the MAT program must hold a baccalaureate degree from an accredited college or university, with an undergraduate major of at least 35 semester hours in the appropriate field of study.

Each student will be required to meet the following program requirements before being granted the MAT degree:

- (1) complete 40 hours of graduate course work in the subject area, with approval of the student's academic department;
- (2) complete 15 semester hours of graduate course work in education and related fields, with approval of the appropriate department in the College of Education;
- (3) pass a final comprehensive examination covering course work and a reading list; and
- (4) receive training in methods of research in the appropriate subject field.

The Master of Arts for Teachers degree program has not been approved for certification by the State Department of Education in Georgia. Any question relating to certification for teaching in the public schools needs to be addressed to the Department of Education in the state in which employment is sought.

Master of Avian Medicine (MAM)

This degree is designed to provide veterinarians with specialized training in the diagnosis, treatment, and prevention of poultry diseases. The degree is open to students who hold the Doctor of Veterinary Medicine degree or its equivalent.

Candidates for this degree must complete for credit an approved program of 39 semester hours of graduate work. To complete requirements, the candidate must stand for an oral examination before the faculty of the department of Avian Medicine. No thesis or foreign language is required.

Master of Business Administration (MBA)

Applicants with baccalaureate degrees in any field of study are eligible to apply to the MBA program. Students with undergraduate business degrees from AACSB accredited institutions are eligible to apply to an accelerated one-year program consisting of a minimum of 41 semester hours. All other students are eligible to apply to the two-year program. All students must have completed

at least one semester of calculus with a grade of C or better and are expected to enter the program computer proficient.

The one-year program begins in the summer. During summer all one-year students take a set of four required courses and two electives. During the regular academic year, the format of the one-year program is identical to the second year of the two-year program.

The first year of the two-year curriculum consists of required course work. These courses provide the student with basic analytical tools as well as the functional and managerial skills necessary to deal with today's business problems. This background provides the student with a basic understanding of organizations and the role of managers in these organizations.

The program's second year consists of electives. Each department in the Terry College of Business provides three-course sequences which can be chosen by the student. The remaining electives may be used to specialize in a third sequence or strengthen an existing concentration. Students are required to complete two specializations of at least six hours each.

Two-Year Curriculum

First-Year Courses

Fall Semester:

Principles of Accounting
Statistical Methods in Business
Business Economics
Management Information Systems Database Analysis
Business Ethics
Negotiation
Leadership/Organizational Behavior

Spring Semester:

Corporate Finance
Marketing Management
Production/Operations Management
Legal & Social Environment of Business
Business Strategy

Second Year Courses

Fall Semester:

Sequence 1, course 1
Sequence 2, course 1
Free elective
Free elective
Free elective
Executive Lecture Series

Spring Semester:

Sequence 1, course 2

Sequence 2, course 2

Free elective

Free elective

Free elective

One-Year Curriculum

The one-year MBA program is designed to meet the needs of students with an undergraduate degree in business. Entering students must have fulfilled the calculus requirement before they matriculate and are expected to enter the program computer proficient.

Summer Term:

First 4 weeks module:

Ethics*

Negotiation*

Statistical Methods in Business*

Second 4 weeks module:

Marketing Management

Financial Accounting

Corporate Finance

Managerial Economics

Operations Management

Management Information Systems**

All Summer courses except statistics are 2 credits.

** Required course.*

*** Elective course—Students will take two of six, based on previous course work and planned sequences.*

Fall/Winter/Spring Semesters: Same as the second year of the Two-Year Program.

Note: The Graduate School of Business Administration requires applicants to submit information in addition to that required by The Graduate School. Files will not be reviewed by the Graduate School of Business Administration until they are complete. Inquiries concerning the MBA program may be made by writing or calling: MBA Program, Graduate School of Business Administration, Terry College of Business, 346 Brooks Hall, The University of Georgia, Athens, Georgia 30602-6264, (706) 542-5671.

Master of Education (MEd)

The Master of Education degree is designed for the student whose vocational objectives require preparation for teaching, supervision, counseling, and/or first line administration in grades P-12 and other educational or professional agencies.

This degree is offered in the following fields: adult education, agricultural education business education, college student affairs administration, communication sciences and disorders, computer-based education, early childhood education, educational leadership educational psychology, elementary education, English education, exercise science family and consumer sciences education, foreign language education, guidance and counseling, health promotion and behavior, human resource and organizational development, instructional technology, marketing education, mathematics education, middle school education, occupational studies, physical education, reading education, recreation and leisure studies (plan B), rehabilitation counseling, safety education, science education, social science education, special education, speech education, and technological studies.

Students who contemplate becoming candidates for this degree should contact the appropriate school, division, or department in the College of Education as to the program to be followed. This degree may be attained through either of the two following plans of work:

PLAN A

The requirements for the degree of Master of Education may be met by the completion of an approved program of a minimum of 33 semester hours of graduate course work. Under this plan, the following two courses must be included in the student's program: a research course and 7650-Applied Project in Education. A maximum of 15 hours of non-resident in-service credit is allowed on the program of study.

PLAN B

Under this option, the requirements for the Master of Education degree may be met by a minimum of 36 semester hours of approved graduate course work. A research course must be included in the student's program. A maximum of 18 hours of non-resident in-service credit is allowed on the program of study.

Master of Fine Arts (MFA)

The basic requirements for this degree are satisfactory completion of an approved program of graduate course work including a creative project or problem which will carry three hours credit.

In art, emphasis will be placed upon a high degree of technical and artistic accomplishment. The student must also have a general knowledge of art history and criticism. Current minimum course requirements are 57 semester hours of approved graduate course work plus 3 hours of ARST 9210, Graduate Exit Studio. ARST 9210 consists of an exhibition of creative work, a written report descriptive of the issues the candidate's work addresses, and a final oral examination. Concentrations are available in ceramics, drawing and painting, fabric design, interior design, jewelry and metalwork, photography, printmaking, and sculpture.

In drama, emphasis will be placed not only upon a high degree of technical and artistic accomplishment but also on a general knowledge of relevant history and literature. The program calls for a minimum of 60 semester hours. For persons already holding a master's degree in drama, up to six of these hours may be waived. Concentrations are available in acting, design/technical theater, dramatic writing, and dramatic media.

The prerequisite for a program in art and drama is the Bachelor of Fine Arts or its equivalent.

Master of Forest Resources (MFR)

This is a professional degree program. The Master of Forest Resources degree is an approved program of 33 semester hours of graduate credit. At least 21 of these hours must be in forest resources and form a logical major. At least 12 hours must be taken outside the field of forest resources. No thesis is required.

Master of Historic Preservation (MHP)

Consistent with the multi-disciplinary nature of historic preservation, persons with baccalaureate degrees in architecture, landscape architecture, urban planning or design, interior design, art history, social history, law, archaeology, real estate, economics, or related disciplines are eligible to apply to the MHP program. The MHP program is designed to prepare students for a wide range of careers in the conservation and management of historic resources in both the built and natural environments. The two-year course of study is structured to develop versatile, competent, and highly motivated professionals who can

perceive preservation opportunities in the broadest sense and who can develop strategies ensuring the protection and use of cultural resources as a part of the fabric of urban and rural environments. The MHP program will provide students, from diverse academic backgrounds, a common concept of preservation philosophy and process through an intensive, community-oriented, practical educational experience which effects a balance between academic and professional training.

Master of Home Economics (MHE)

This program is available for students in the Department of Child and Family Development and the Department of Foods and Nutrition who are seeking master's level training that specifies that the training is in home economics. Basic admission requirements are essentially the same as those required for admission to the Master of Science programs of either department. The minimum requirement for the degree of Master of Home Economics is an approved program of 36 semester hours with two semesters of resident study. The program of study must include the appropriate 7210 course on which an acceptable written report must be presented.

Master of Landscape Architecture (MLA)

The MLA program is professionally accredited and is designed to prepare students for professional practice at an advanced level. Applicants are accepted with previous degrees in the liberal arts and all specialized disciplines.

Program lengths are determined with consideration for academic backgrounds and related experience. Candidates not holding a bachelor's degree in landscape architecture enter the three-year program; their program requires 78 graduate semester credits. Students with the BLA degree complete two years of study; their program requires 52 credits. Practicing landscape architects with over 10 years responsible experience may be considered for an accelerated one-year program that emphasizes specialization.

All students complete a thesis that addresses a contemporary need in a specific topic area.

Master of Laws (LLM)

The Master of Laws program combines intensive supervised work in a particular area of law with the taking of courses in related fields.

A minimum of two semesters of resident study is required, with a total of 27 semester hours of credit. In addition to the Graduate Seminar (2-hour required course in the Fall semester and 2-hour required course in the Spring semester) at least 12 hours of credit must be earned in courses at the Law School, and 7 hours of credit must be devoted to thesis preparation. The remaining 4 hours of credit may be earned either in course work at the Law School or other Faculty of the University, if appropriate to the student's plan of study, or in further thesis research. The student must maintain a cumulative average of 2.3 or C+, or above, in accordance with the Law School's grading system, for all graded course work, and must prepare a thesis of publishable quality and form that deals with a legal topic approved by the Graduate Legal Studies Committee. The thesis grade must be B or 3.0 or above to satisfy the requirements for the LLM degree. The thesis will be prepared under the guidance of a Law School faculty member, who will act as the major professor, and who will determine the grade on the thesis. The thesis must be approved as to form and substance by the major professor and a second reader designated by the Director of Graduate Legal Studies. The second reader will be a faculty member of this or another university or otherwise a legal expert in the subject area of the thesis. Together, the major professor and the second reader shall constitute the reading committee for the thesis.

American law students who wish to pursue the Master of Laws degree must hold an AB degree or equivalent from an approved college and a JD degree or equivalent from a law school which is a member of the Association of American Law Schools, which is approved by the American Bar Association, or is a state-accredited law school.

Students from other countries who wish to apply for the LLM must hold a degree equivalent to the JD from a recognized law school with an academic record and study program acceptable to the Faculty of the Law School. Further, applicants from non-

English speaking countries must possess proficiency in English as demonstrated on the Test of English as a Foreign Language (TOEFL).

Each student's record of legal studies must display high scholarly aptitude, and the data required in the LLM application form must reflect a well-conceived plan of specialized study and research.

For additional information and applications, please write Graduate Legal Studies, School of Law, The University of Georgia, Athens, Georgia 30602-6012.

Master of Marketing Research (MMR)

This degree program is designed to develop marketing research professionals with a solid understanding of business and marketing analyses. The program, which begins each June, includes 39 semester hours of graduate work including two semesters (summer and fall) of internship. Students without prior business courses must complete foundation courses before entering the program. No thesis is required.

A Board of Advisors composed of the nation's leading marketing researchers works closely with faculty on program evaluation, instruction, and funding. Marketing Research Assistantships provide a stipend of \$3,600 for each student. Admission is very selective.

Master of Mass Communication (MMC)

The Master of Mass Communication degree serves those students whose career goals indicate that additional course work will be more advantageous to them than the completion of the traditional thesis that is required for the Master of Arts degree. The additional course work provides an opportunity for more breadth and depth of exposure to areas which lay the foundations of career development whether in additional mass communication courses or in cognate courses that tie into the candidate's goals. A total of 33 semester hours of graduate course work is required to complete the program.

Master of Music (MM)

This degree offers major concentrations in performance, piano pedagogy, chamber music/accompanying, choral conducting,

woodwinds, composition, and music literature. Each concentration requires an approved program with a minimum number of hours ranging from 30 to 36 semester hours depending on the concentration elected. Each program of study includes a final project that is satisfied by a recital, a large original composition, or an approved research project.

Master of Music Education (MMEd)

This degree offers a concentration in music education or music therapy. Completion of the program leads to the MMEd degree and Georgia teacher certification in music at the T-5 level. Those who complete the degree program with a concentration in music therapy and complete a six-month internship in music therapy are also academically qualified to become registered music therapists.

This degree may be obtained through either of two plans. Under either plan, A or B, an oral and/or written comprehensive examination must be passed during the final semester of work.

PLAN A

The requirements for this degree may be met by completion of an approved program of study of 30 graduate hours in music, education, and music education, plus three semester hours in applied problems in music. This program must include at least 24 semester hours outside the field of education. A research course and other courses required by the department must be included in the student's program.

PLAN B

Under this option, the requirements may be met by completion of an approved program of 36 semester hours of graduate course work. These courses must include 30 semester hours outside the field of education. A research course and other courses required by the department must be included in the program.

Master of Plant Protection and Pest Management (MPPPM)

The Master of Plant Protection and Pest Management program is designed to prepare graduates with comprehensive, multidisciplinary training in plant pathology, entomology, and weed science for employ-

ment by industrial, extension, or regulatory agencies.

Applicants for the Master of Plant Protection and Pest Management program must hold the baccalaureate degree from an accredited college or university. Basic admission requirements are essentially the same as those required for admission to Master of Science programs in each of the three university departments cooperating to offer the program. Students who satisfy all basic admission requirements, but whose background in pertinent biological and agricultural sciences is inadequate, must enroll for selected undergraduate courses as a means of removing deficiencies. Inquiries concerning specific admission requirements and procedures should be addressed to: Coordinator of MPPPM Program, Department of Entomology, Biological Sciences Building, The University of Georgia, Athens, Georgia 30602-2603.

A total of 36 semester hours of graduate course work is required to complete the program. Students will normally complete two internships. Usually, the first will come near the midpoint of the program, and the second will be the final course requirement. In some instances, a six-month internship will be recommended by the student's advisory committee. There is no thesis or language requirement. Each candidate for the degree must pass a final oral examination.

Master of Public Administration (MPA)

The purpose of the MPA degree is to educate students for administrative and managerial careers in the federal, state, and local levels of government. The prerequisites for the program include a baccalaureate degree, an undergraduate course in American government, and a course which includes work in accounting, computer science, or statistics. The program requires a minimum of 41 semester hours of course work. Twenty hours are required core courses or socialization courses while the remainder are devoted to elective specialties. An internship, full-time for three months or part-time for six months, is required for students not having administrative experience. It usually is served in a state, local, or federal government agency. Finally, the student must pass a comprehensive written examination in four fields of public administration.

Master of Social Work (MSW)

A program of the School of Social Work, this graduate professional degree typically requires four semesters of full-time study. Applicants from accredited BSW programs may receive advanced standing and earn the MSW degree in three semesters. Students who transfer from accredited graduate social work programs are required to take a minimum of 40 semester hours of study.

Academic work is divided between classroom and field instruction. Selected classes and field instruction are held in off-campus locations. Research is emphasized through evaluation of practice and an optional thesis.

In addition to meeting the general requirements of the Graduate School, applicants to the School of Social Work must have completed thirty semester or eighteen semester credit hours in the behavioral and social sciences that include content on the following: social, psychological, and biological determinants of human behavior; diverse cultures; social conditions; and social problems. The Master of Social Work program is fully accredited by the Council on Social Work Education.

Specialist in Education (EdS)

The Specialist in Education degree is a self-contained degree program intermediate between the master's degree and the doctor's degree both in time and depth. It provides advanced study for those preparing for positions which call for a higher level of competence and specialization than that of the master's degree but without the heavy emphasis on research of the doctor's degree.

The degree is offered in the following fields: adult education, art education, communication sciences and disorders, early childhood education, educational leadership, educational psychology, elementary education, English education, foreign language education, guidance and counseling, instructional technology, mathematics education, middle school education, music education, occupational studies, physical education, reading education, safety education, school psychology, science education, social science education, special education, and speech education.

Requirements

1. *Admission.* An applicant may be admitted as a prospective candidate for the Specialist in Education degree upon recommendation of the appropriate department/division in the College of Education and approval of the dean of the Graduate School. To be admitted to this degree program, an applicant must hold a master's degree from a regionally accredited institution.

2. *Time Limit.* All requirements for the Specialist in Education degree must be completed within six years, beginning with the first registration for courses on the student's program of study. An extension of time may be granted only on conditions beyond the control of the student.

3. *Program of Study.* A program of study should be prepared by the student and the major professor during the first semester in residence. The program for the degree shall consist of a minimum of 30 semester hours of study at the graduate level beyond the master's degree. The program shall be planned as a logically organized whole, in light of the student's record in previous undergraduate and graduate courses, performance on standardized and non-standardized examinations, and the entire professional experience. The program of study, approved by the major professor and the graduate coordinator, is submitted to the Graduate School when the student applies for admission to candidacy. To be eligible for inclusion in a program of study, course work taken after January 1, 1977, must have been taken after the student was admitted as a prospective candidate for the Specialist in Education degree. A maximum of 15 hours of non-resident in-service credit is allowed on the program of study.

4. *Language Requirement.* All candidates for graduate degrees are required to show correctness and good taste in their use of both written and spoken English.

5. *Accepting Credit by Transfer.* A student fully accepted into a Specialist in Education degree program at an accredited institution may transfer six semester hours of graduate course work provided that the courses to be transferred constitute a logical part of the student's program of study and are approved by the student's major professor, the graduate coordinator, and the dean of the Graduate School. Such transfer of credit cannot exceed six semester hours, cannot

reduce the residence requirement to fewer than 15 hours, and must fall within the time limit of the degree. The courses to be transferred may not have been used as part of the requirements for another degree. No grade below B (3.0) may be transferred. Transfer grades are not used in calculating semesterly and cumulative averages. All requests for transfer credit, with accompanying official transcripts, must be in the Graduate School at least 30 days prior to the time the student plans to graduate.

6. *In-Service Credit.* A maximum of 15 semester hours of graduate in-service credit taken at non-resident centers may be included in a program of study for the degree. This maximum will be reduced by any credit transferred from another institution.

7. *Admission to Candidacy.* On the completion of four or five courses, the student has the responsibility to see that an application for admission to candidacy is filed with the Graduate School. This application is a certification by the student's major department that the student has demonstrated the ability to do acceptable graduate work in the chosen field and has made normal progress toward the degree. The specific requirements for admission to candidacy are listed below:

- (1) all prerequisites set as a condition to admission have been completed;
- (2) the program of study has been approved by the major professor, the graduate coordinator, and the dean of the Graduate School; and
- (3) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed courses on the program of study (no course with a grade below C may be placed on the program of study).

8. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

9. *Final Examination.* The candidate must pass a written and/or oral comprehensive examination administered by the department. The results of the examination must be reported to the Graduate School.

10. *Registration Requirement.* A student must be registered at the University of Georgia for a minimum of three hours of credit the semester in which all degree requirements are completed.

11. *Final Clearance.* All requirements for the degree must be completed and reported

to the Graduate School no later than one week prior to graduation.

Doctor of Education (EdD)

This degree provides advanced professional training for careers in teaching, administration, and other educational services. The degree is offered in the following fields of education: adult education, art education, early childhood education, education of gifted, educational leadership, educational psychology, elementary education, exercise science, higher education, instructional technology, language education, mathematics education, music education, occupational studies, physical education, reading education, recreation and leisure studies, science education, social science education, and special education. Specialization in research training and in subject fields appropriate to elementary, secondary, and college teaching is provided.

Departments that have been approved to offer the Doctor of Education degree may implement this degree program by the adoption of appropriate rules and regulations. Departmental rules and regulations may not, however, conflict with the policies, rules, and regulations of the Graduate School.

Requirements

1. *Admission.* An applicant who desires to pursue advanced professional training in education beyond the master's degree, with a view to becoming a candidate for the Doctor of Education degree, will be expected to file formal application and present himself to the faculty of the appropriate department/division in the College of Education for special tests and interviews. Recommendation on admission will be made by the department only after its screening procedures have been carried out. Admission will be upon the recommendation of the graduate coordinator, or an authorized representative, and approval of the dean of the Graduate School.

2. *Residence.* The degree presupposes a minimum of three full years of study beyond the bachelor's degree and cannot be secured through summer work alone. At least two consecutive semesters (i.e., enrollment for a minimum of 20 hours of consecutive course work included on the program of study) must be spent in full-time resident study on the campus of the University of Georgia, one of which may be a summer semester.

3. *Time Limit.* All requirements for this degree, except the dissertation and final oral examination, must be completed within a period of six years. This time requirement begins with the first registration for graduate courses on the student's program of study.

A candidate for the Doctor of Education degree who fails to complete all degree requirements within five years after passing the comprehensive examinations and being admitted to candidacy will be required to take the comprehensive examinations again and be admitted to candidacy a second time.*

4. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

5. *Advisory Committee.* Before the end of the first year of residence of a prospective candidate for the Doctor of Education degree and upon the recommendation of the departmental graduate coordinator, the dean of the Graduate School shall appoint an advisory committee for the student. The committee will consist of a major professor, as chairman, and four additional members. The major professor and at least two of the other members of the committee must be appointed members of the graduate faculty. The committee will be recommended to the dean of the Graduate School by the graduate coordinator after consultation with the student and faculty member involved.

The advisory committee, in consultation with the student, is charged with planning the student's program of study. It is also charged with approving the program of study, arranging the comprehensive written and oral examinations, approving a subject for the dissertation, approving the completed dissertation, and approving the student's defense of his/her research. The committee should advise the student of required research skills and other requirements.

Departmental recommendations for the advisory committee, and any replacements, shall be determined by procedures approved by a majority of the graduate faculty of that department.

6. *Programs of Study.* A preliminary program of study based on a minimum of 80 semester hours of course work beyond the baccalaureate degree, excluding dissertation credit, will be submitted to the graduate coordinator by the end of the student's first year of residence. The program of study must be developed by the major professor and the doctoral student and approved by a majority of the advisory committee. The program of study should constitute a logical whole and be significantly related to the student's vocational objectives. A minimum of 30 credit hours of course work, exclusive of dissertation credit, must be taken at the University of Georgia at the doctoral level; i.e., 40 total credit hours must be taken at the University of Georgia.

A final program of study will be submitted to the Graduate School prior to application for admission to candidacy. This program of study must be submitted on the proper form for approval by the advisory committee, the graduate coordinator, and the dean of the Graduate School. The final program of study must show all graduate courses relevant to the doctoral program (including courses from the master's degree and courses transferred from other universities), and not just courses satisfying the minimum degree requirement. A minimum of three hours of 9300, doctoral dissertation, must be included on the program of study.

Each department should evaluate carefully and fully each doctoral student's progress and qualifications at the end of each year of study in order to advise the student whether or not to continue in the program.

7. *Comprehensive Examinations.* A student must pass formal, comprehensive written and oral examinations before being admitted to candidacy for the degree. These examinations are administered by the student's advisory committee.

The written comprehensive examination, although administered by the advisory committee, may be prepared and graded according to the procedures and policies in effect in the student's department. The oral comprehensive examination will be an inclusive examination within the student's field of study. An examination of the student's dissertation prospectus may precede or follow the oral comprehensive examination but may not take the place of the oral comprehensive examination. All members of the student's advisory committee must be

*When a candidate for a doctoral degree, who was admitted to candidacy prior to September, 1973, is readmitted to the Graduate School, he/she will have five years from the date of first readmission to complete all degree requirements.

present for the entire period of both oral examinations.

The oral comprehensive examination is open to all members of the faculty and shall be announced by the Graduate School. The graduate coordinator must notify the Graduate School of the time and place of this examination at least two weeks before the date of the examination.

Following each examination, written and oral, each member of the advisory committee will cast a written vote of pass or fail on the examination. At least four out of a possible five positive votes are required to pass each examination. The results of both examinations will be reported to the Graduate School.

8. *Dissertation Planning.* The dissertation, being the most important single requirement for the Doctor of Education degree, should demonstrate the intelligent application of appropriate research procedures to the investigation of a problem in educational theory or practice. The dissertation problem must be conducted on some subject related to the student's major field of study and demonstrate evidence of scholarly ability and a thorough evaluation of relevant source materials. The conclusions must be logical, the literary form acceptable, and the contribution to education theory or practice substantial.

Persons who serve on the advisory committee at the time the dissertation research is undertaken must be faculty members knowledgeable in the areas of the student's research. They should be selected irrespective of their departmental affiliation. Usually membership of the advisory committee will remain unchanged during a student's entire doctoral program. However, if changes in the original committee are necessary, all parties are to be notified.

The major professor and advisory committee shall guide the student in planning the dissertation. The student will prepare a dissertation prospectus. When the major professor certifies that the dissertation prospectus is satisfactory, it must be formally considered by the advisory committee in a meeting with the student. This formal consideration may not take the place of the comprehensive oral examination.

Approval of the dissertation prospectus signifies that members of the advisory committee believe that it proposes a satisfactory research study. Approval of the prospectus requires the agreement of at least four of the five members of the advisory committee

as evidenced by their signing an appropriate form, which, together with the approved prospectus, is filed with the graduate coordinator.

9. *Admission to Candidacy.* The student is responsible for initiating an application for admission to candidacy so that it is filed with the dean of the Graduate School at least two semesters before the date of graduation. This application is a certification by the student's major department that the student has demonstrated ability to do acceptable graduate work in the chosen field of study and that:

- (1) all prerequisites set as a condition to admission have been satisfactorily completed;
- (2) research skills requirements, if applicable, have been met;
- (3) the final program of study has been approved by the advisory committee, the graduate coordinator, and the dean of the Graduate School;
- (4) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed courses on the program of study (no course with a grade below C may be placed on the final program of study);
- (5) written and oral comprehensive examinations have been passed and reported to the Graduate School;
- (6) a dissertation prospectus has been approved;
- (7) the advisory committee, including any necessary changes in the membership, is confirmed and all its members have been notified of their appointments; and
- (8) the residence requirement has been met.

The major professor has the primary responsibility for guiding research, but the student should consult all members of the advisory committee to draw upon their expertise in relevant areas.

After admission to candidacy, a student must register for at least two additional semesters and a total minimum of 10 hours of dissertation or other appropriate credit. A student must register for a minimum of three hours of credit in any semester when using University facilities and/or staff time.

Once a student has been admitted to candidacy, the department has an ethical responsibility to ensure that appropriate faculty mentorship is provided to the candidate for completion of the degree.

10. Dissertation Approval and Defense. When the major professor is satisfied with the completed dissertation, he or she will certify that it has his or her approval and is ready to be read. The major professor will then distribute copies of the dissertation to the remaining members of the advisory committee, schedule a final oral defense, and notify the Graduate School. Subsequently, the Graduate School will announce the time and place of the defense of the dissertation to the University community. The committee members will have three weeks to read and evaluate the completed dissertation.

Written assent of three of the four committee members (other than the major professor) will be required before a dissertation will be approved as ready for the final defense. If the advisory committee declines to approve the dissertation as ready for the final defense, the major professor will notify the student and the Graduate School.

The defense of the dissertation will be chaired by the student's major professor and attended by all members of the advisory committee. It is open to all members of the University community. Four of the five members of the advisory committee must approve the student's dissertation and defense and must certify their approval in writing. The results of the defense of the dissertation must be reported to the Graduate School at least one week prior to graduation.

Once the dissertation has been approved by the advisory committee and the final oral examination has been passed, the dissertation must be submitted to the Graduate School for final approval no later than the last day of classes of the following semester. Dissertations which are not submitted by this deadline must be defended again and approved by the Advisory Committee before they will be considered by the Graduate School for final approval.

11. Binding the Dissertation. Three official copies of the dissertation must be filed in the University Library for binding. Each copy must carry a certificate of approval signed by the major professor and the dean of the Graduate School.

12. Other Requirements. Before the degree will be awarded, the student must file a copy of the abstract of the dissertation (not more than 350 words) with the Graduate School and the library. At the same time, the student must submit a receipt showing that he/she had deposited with the treasurer of the Uni-

versity the amount of \$50 to cover the cost of microfilming the dissertation. If the student desires to have the dissertation copyrighted, an additional charge of \$35 must be paid. This fee must be presented at the University Library in the form of a certified check or money order made payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. A student must enroll for at least three hours of credit in the semester in which graduation requirements are completed.

Cooperative Doctoral Programs

The University cooperates with State University of West Georgia to offer the Doctor of Education degree in educational leadership. The University also cooperates with Fort Valley State University to offer the Doctor of Education degree in the following areas: adult education, educational leadership, and occupational studies. For information concerning this program, please contact the Office of Graduate Admissions, The University of Georgia, Athens, Georgia 30602-7402.

Doctor of Musical Arts (DMA)

The program of study leading to the Doctor of Musical Arts degree provides advanced professional, academic, and research preparation for music careers in teaching, performing, composing, and conducting. Major concentrations are offered in music education, performance, composition, and choral conducting. The School of Music should be contacted regarding applied music options available within the performance area.

Requirements

1. Admission. In addition to meeting the general requirements for graduate admission to the University, an applicant must present evidence of potential for significant scholarly, artistic, and professional attainment in his or her intended major area of concentration. Such potential is normally documented through an assessment of the applicant's academic and professional background and standing; an audition; a portfolio review of musical compositions and performances; letters of recommendation; an interview; and other standard ad-

mission review procedures as appropriate to the intended major field of concentration. A recommendation for admission to the program from the School of Music must be approved by the dean of the Graduate School.

2. *Diagnostic Examinations.* Diagnostic examinations are administered prior to or during the initial term of enrollment. Information concerning the diagnostic examinations is available from the Office of Graduate Studies, School of Music.

3. *Residence.* The granting of this degree presupposes a minimum of three full years of study beyond the bachelor's degree. At least two consecutive semesters of full-time work (i.e., enrollment for a minimum of 20 hours of consecutive course work included on the program of study) must be spent in resident study on the campus of the University of Georgia.

4. *Time Limit.* All requirements for the degree except the dissertation or document* and final oral examination must be completed within a period of six years. This time requirement dates from the first enrollment for graduate course work applicable to the student's official program of study.

A candidate who fails to complete all degree requirements within five years after passing the comprehensive examinations and being admitted to candidacy will be required to take the comprehensive examinations again and reestablish degree candidacy.

5. *Research Skills Requirements.* The program of study requires research competencies appropriate to the elected major and minor fields of concentration. Research skills requirements will vary but may include such areas as statistics, computer science, music bibliography, diction, and foreign languages.

A student electing voice performance as the major field of concentration is required to demonstrate a reading knowledge of two foreign languages selected from Italian, German, or French. A student electing a major in either voice performance or choral conducting must demonstrate competence in German, French, and Italian diction and pronunciation. For any other student, research skills are specified by the advisory committee as appropriate to the major or secondary field of concentration. Undergraduate course credit earned in the completion of language or other research skills

requirements is not applicable to the minimum number of hours necessary for the awarding of the degree. Information concerning methods of satisfying research skills requirements may be obtained from the Office of Graduate Studies, School of Music.

6. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

7. *Advisory Committee.* The graduate coordinator of the School of Music serves as program advisor and recommends an advisory committee to be appointed by the dean of the Graduate School during the student's first year of enrollment. The major professor, program advisor, and three faculty members representing the second field of concentration and the areas of music history/literature and music theory comprise the membership of the advisory committee.

The advisory committee, in consultation with the student, is charged with planning the student's program of study, specifying research skills requirements, arranging for and administering the comprehensive examinations, approving the topic for the document or dissertation, approving and evaluating recital requirements, and approving the student's defense of his or her research.

Recommendations for advisory committee membership, and replacements should vacancies occur, must meet with the approval of the Graduate Studies Committee and the School of Music and the dean of the Graduate School.

8. *Programs of Study.* The program of study involves the completion of course work in five areas: major field; minor field; music history/literature and theory; music in higher education; and research/special requirements. A preliminary program of study is normally developed during the first year of residence. The program must be approved by a majority of the advisory committee.

A final program of study will be submitted to the Graduate School prior to application for admission to candidacy. The program of study must be submitted on the proper form for approval by the advisory committee, the graduate coordinator, and the dean of the Graduate School. The final program of study must show all graduate courses relevant to the doctoral program including courses from the master's degree, courses

*See item number 10.

transferred from other universities, and those courses taken in residence stipulated as satisfying minimum degree requirements within the stated matriculation areas. A minimum of three hours of 9300, doctoral dissertation, must be included on the program of study.

The department should evaluate carefully and fully each doctoral student's progress and qualifications at the end of the first year of study in order to advise the student whether or not to continue in the program.

9. *Comprehensive Examinations.* The comprehensive examinations are designed to evaluate the student's ability to assimilate and integrate knowledge, apply historical and theoretical concepts, demonstrate skills, and draw conclusions. The examinations, consisting of written and oral segments, may include a practicum, and are normally scheduled at or near the completion of course work. They cover doctoral course work completed in meeting the requirements of each cognate area of study for the degree, graduate work completed at the master's level, and general musical knowledge acquired through independent study, research, and professional experience. The advisory committee prepares, administers, and evaluates the comprehensive examinations. The major professor reports the outcome to the dean of the Graduate School. At least four out of a possible five affirmative votes are required to pass both the written and oral examinations. Successful completion of the written examination is a prerequisite for scheduling the oral comprehensive examination. All members of the student's advisory committee must be present for the entire oral examination.

The oral comprehensive examination is open to all members of the faculty and shall be announced by the Graduate School. The graduate coordinator notifies the Graduate School of the time and place of the oral examination at least two weeks prior to its administration.

An examination of the student's dissertation prospectus may follow the oral comprehensive examination or be scheduled at a later date. The examination of the dissertation prospectus may not take the place of the oral comprehensive examination.

10. *Dissertation/Document.* A candidate electing music education as the major field of concentration must present a dissertation representing originality of research, independent thinking, scholarly ability, and technical

mastery of the chosen topic of study. A candidate of performance, choral conducting, or composition is required to present a written document which, in conjunction with required recitals, is submitted in fulfillment of dissertation requirements. The document is more limited in scope than the dissertation, though comparable in scholarship and its contribution to existing knowledge in the field.

The dissertation or document must demonstrate originality and scholarship, the conclusions must be quantified, the literary form consistent with normal standards for scholarly writing, and the contribution to knowledge meriting publication. A candidate whose major field of concentration is composition or conducting may elect a dissertation with the consent of the advisory committee. When composition is the major field, the dissertation or document normally will include one or more major original musical works. Scores as well as an accompanying analytical essay are required.

11. *Recitals.* A minimum of three public recitals is required for a student whose major concentration is performance. A student with a concentration in composition is required to present two public recitals. Four recital performances are required of a student majoring with a concentration in choral conducting and literature.

Programs for all recitals and performances must be approved two months in advance by the major professor and advisory committee. When a lecture-recital is to be given, an outline of the lecture must accompany the program proposal.

The first full recital must be presented prior to scheduling the written comprehensive examination; the last recital may not be scheduled until the oral comprehensive examination has been satisfactorily completed and degree candidacy established.

Recital projects presented in partial fulfillment of degree requirements will be evaluated by the full membership of the advisory committee. The committee will notify the major professor if the recital presentation is approved. Should the committee decline approval, the major professor and the dean of the Graduate School are so notified. The graduate coordinator of the School of Music, or an approved designate, will be responsible for coordinating the evaluation of recital project presentations.

12. *Dissertation/Document Planning and Approval.* The student is responsible for the

development of a proposal for the dissertation or document. The proposal is developed with guidance provided by the major professor or designated chairman of the advisory committee. The advisory committee is to be consulted on a regular basis during the period of proposal development. Approval of the prospectus requires the agreement of at least four of the five members of the advisory committee as evidenced by their signing an approval sheet attached to the final draft of the prospectus. This action signifies that members of the advisory committee believe that the prospectus proposes a satisfactory research study. A copy of the approved prospectus is filed with the graduate coordinator.

13. *Admission to Candidacy.* The student is responsible for initiating an application for admission to candidacy so that it is filed with the dean of the Graduate School at least two semesters before the date of graduation. This application is a certification by the School of Music that the student has demonstrated ability to do acceptable graduate work in the major concentration and that:

- (1) all prerequisites set as a condition to admission have been satisfactorily completed;
- (2) research skills requirements have been met;
- (3) the final program of study has been approved by the advisory committee, the graduate coordinator, and the dean of the Graduate School;
- (4) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed graduate courses on the program of study (no course with a grade below C may be placed on the final program of study);
- (5) written and oral comprehensive examinations have been passed and reported to the Graduate School;
- (6) the advisory committee, including any necessary changes in the membership, is confirmed and all its members have been notified of their appointment; and
- (7) the residence requirement has been met.

After admission to candidacy, a student must register at least two additional semesters and a total minimum of 10 hours of dissertation or research credit. The student must register for a minimum of three hours of credit in any semester when using University facilities and/or staff time.

Once a student has been admitted to candidacy, the department has an ethical responsibility to ensure that appropriate faculty mentorship is provided to the candidate for completion of the degree.

14. *Dissertation Approval and Defense.* When the major professor is satisfied with the completed dissertation or document, he or she will certify that it has his or her approval and is ready to be read. The major professor will then distribute copies of the manuscript to the remaining members of the advisory committee, schedule a final oral defense, and notify the dean of the Graduate School. Subsequently, the Graduate School will announce the time and place of the defense of the dissertation or document to the University community. The committee members will have three weeks to read and evaluate the completed manuscript.

Written assent of three of the four committee members (other than the major professor) will be required before a dissertation or document will be approved as ready for the final defense. If the advisory committee declines to approve the dissertation or document as ready for the final defense, the major professor will notify the student and the dean of the Graduate School.

The defense of the dissertation or document will be chaired by the student's major professor and attended by all members of the advisory committee. Four of the five members of the advisory committee must approve the student's dissertation or document and defense and must certify their approval in writing. The results of the defense of the dissertation or document must be reported to the Graduate School at least one week prior to graduation.

Once the dissertation has been approved by the advisory committee and the final oral examination has been passed, the dissertation must be submitted to the Graduate School for final approval no later than the last day of classes of the following semester. Dissertations which are not submitted by this deadline must be defended again and approved by the Advisory Committee before they will be considered by the Graduate School for final approval.

15. *Binding the Dissertation/Document.* Three official copies of the dissertation or document must be filed in the University Library for binding. Each copy must carry a certificate of approval signed by the major

professor and the dean of the Graduate School.

16. *Other Requirements.* Before the degree will be awarded, the student must file a copy of the abstract of the dissertation or document (not more than 350 words) with the Graduate School and the library. At the same time, the student must submit a receipt showing that he or she has deposited with the treasurer of the University the amount of \$50 to cover the cost of micro-filming the dissertation or document. If the student desires to have the dissertation or document copyrighted, an additional charge of \$35 must be paid. This fee must be presented at the University Library in the form of a certified check or money order made payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. A student must be registered for a minimum of three hours of credit the semester in which all degree requirements are completed.

Doctor of Public Administration (DPA)

The objective of the program is to provide doctoral-level training for several client groups. First, the program will prepare students to serve in executive or upper managerial levels in local, state, and federal jurisdictions. Second, the program will prepare students for a variety of institutional settings that have significant interfaces with public agencies. These include various institutes, private planning agencies, and consulting organizations. Third, the program will help prepare individuals for specialized research and teaching careers.

The department may implement this degree program by the adoption of appropriate rules and regulations. Departmental rules and regulations may not, however, conflict with the policies, rules, and regulations of the Graduate School.

Requirements

1. *Admission.* An applicant may be admitted as a prospective candidate for the Doctor of Public Administration degree upon certification by the major department that he or she is a person of proper attainment and promise. The department must certify that appropriate courses can be offered and re-

quired research adequately supported and directed. Admission must be approved by the dean of the Graduate School.

2. *Residence.* The granting of this degree presupposes a minimum of three full years of study beyond the bachelor's degree. At least two consecutive semesters of full-time work (i.e., enrollment for a minimum of 20 hours of consecutive course work included on the program of study) must be spent in resident study on this campus. If the student holds an assistantship or has other part-time duties, the residence requirement will be increased to provide the equivalent of two consecutive semesters of full-time study.

3. *Time Limit.* All requirements for the degree, except the dissertation and final oral examination, must be completed within a period of six years. This time requirement dates from the first registration for graduate courses on the program of study.

A candidate for the Doctor of Public Administration degree who fails to complete all degree requirements within five years after passing the comprehensive examinations and being admitted to candidacy will be required to take the comprehensive examinations again and be admitted to candidacy a second time.*

4. *Grade Average.* To be eligible for graduation, a student must maintain a 3.0 (B) average on all graduate courses taken and on all courses on the program of study.

5. *Advisory Committee.* Before the end of the first year of residence of a prospective candidate for the Doctor of Public Administration degree and upon the recommendation of the departmental graduate coordinator, the dean of the Graduate School shall appoint an advisory committee for the student. The committee will consist of a major professor, as chairman, and four additional members. The major professor and at least two of the other members of the committee must be appointed members of the graduate faculty. The committee will be recommended to the dean of the Graduate School by the graduate coordinator after consultation with the student and faculty members involved.

*When a candidate for a doctoral degree, who was admitted to candidacy prior to September, 1973, is readmitted to the Graduate School, he/she will have five years from the date of first readmission to complete all degree requirements.

The advisory committee, in consultation with the student, is charged with planning the student's program of study. It is also charged with approving the program of study, arranging the comprehensive written and oral examinations, approving a subject for the dissertation, approving the completed dissertation, and approving the student's defense of his or her research. The committee should advise the student of required research skills and other requirements.

The department's recommendations for the advisory committee, and any replacements, shall be determined by procedures approved by a majority of the graduate faculty of the department.

6. *Programs of Study.* A preliminary program of study, developed by the major professor and the doctoral student and approved by a majority of the advisory committee, will be submitted to the graduate coordinator by the end of the student's first year of residence. The program of study should constitute a logical whole.

A final program of study will be submitted to the Graduate School prior to application for admission to candidacy. This program of study must be submitted on the proper form for approval by the advisory committee, the graduate coordinator, and the dean of the Graduate School. The final program of study must show all graduate courses relevant to the doctoral program (including courses from the master's degree and courses transferred from other universities), and not just courses satisfying the minimum degree requirement. A minimum of five hours of 9300, doctoral dissertation, must be included on the program of study.

The department should evaluate carefully and fully each doctoral student's progress and qualifications at the end of the first year of study in order to advise the student whether or not to continue in the program.

7. *Comprehensive Examinations.* A student must pass formal, comprehensive written and oral examinations before being admitted to candidacy for the degree. These examinations are administered by the student's advisory committee.

The written comprehensive examination, although administered by the advisory committee, may be prepared and graded according to the procedures and policies in effect in the student's department. The oral comprehensive examination will be an in-

clusive examination within the student's fields of study. An examination of the student's dissertation prospectus may precede or follow the oral comprehensive examination but may not take the place of the oral comprehensive examination. All members of the student's advisory committee must be present for the entire period of both oral examinations.

The oral comprehensive examination is open to all members of the faculty and shall be announced by the Graduate School. The graduate coordinator must notify the Graduate School of the time and place of this examination at least two weeks before the date of the examination.

Following each examination, written and oral, each member of the advisory committee will cast a written vote of pass or fail on the examination. At least four out of a possible five positive votes are required to pass each examination. The results of both examinations will be reported to the Graduate School.

8. *Admission to Candidacy.* The student is responsible for initiating an application for admission to candidacy so that it is filed with the dean of the Graduate School at least two semesters before the date of graduation. This application is a certification by the student's major department that the student has demonstrated ability to do acceptable graduate work in the chosen field of study and that:

- (1) all prerequisites set as a condition to admission have been satisfactorily completed;
- (2) research skills requirements have been met;
- (3) the final program of study has been approved by the advisory committee, the graduate coordinator, and the dean of the Graduate School;
- (4) an average of 3.0 (B) has been maintained on all graduate courses taken and on all completed courses on the program of study (no course with a grade below may be placed on the final program of study);
- (5) written and oral comprehensive examinations have been passed and reported to the Graduate School;
- (6) the advisory committee, including any necessary changes in the membership, is confirmed and all its members have been notified of their appointments; and

(7) The residence requirement has been met.

After admission to candidacy, a student must register for at least two additional semesters and a total minimum of 10 hours of dissertation or other appropriate credit. A student must register for a minimum of three hours of credit in any semester when using University facilities and/or staff time.

Once a student has been admitted to candidacy, the department has an ethical responsibility to ensure that appropriate faculty mentorship is provided to the candidate for completion of the degree.

9. *Dissertation Planning.* Students pursuing this degree must present a dissertation on some subject connected with their major field of study. The dissertation must represent originality in research, independent thinking, scholarly ability, and technical mastery of a field of study. The conclusions must be logical, the literary form acceptable, and the contribution to knowledge meriting publication.

Persons who serve on the advisory committee at the time the dissertation research is undertaken must be faculty members knowledgeable in the areas of the student's research. They should be selected irrespective of their departmental affiliation. Usually membership of the advisory committee will remain unchanged during a student's entire doctoral program, while at other times changes in the original committee will be necessary.

The major professor has the primary responsibility for guiding research, but the student should consult all members of the advisory committee to draw upon their expertise in relevant areas.

The major professor and advisory committee shall guide the student in planning the dissertation. The student will prepare a dissertation prospectus. When the major professor certifies that the dissertation prospectus is satisfactory, it must be formally considered by the advisory committee in a meeting with the student.

Approval of the dissertation prospectus signifies that members of the advisory committee believe that it proposes a satisfactory research study. Approval of the prospectus requires the agreement of at least four of the five members of the advisory committee as evidenced by their signing an appropriate form, which, together with the approved prospectus, is filed with the graduate coordinator.

10. *Dissertation Approval and Defense.* When the major professor is satisfied with the completed dissertation, he or she will certify that it has his or her approval and is ready to be read. The major professor will then distribute copies of the dissertation to the remaining members of the advisory committee, schedule a final oral defense, and notify the Graduate School. Subsequently, the Graduate School will announce the time and place of the defense of the dissertation to the University community. The committee members will have three weeks to read and evaluate the completed dissertation.

Written assent of three of the four committee members (other than the major professor) will be required before a dissertation will be approved as ready for a final defense. If the advisory committee declines to approve the dissertation as ready for the final defense, the major professor will notify the student and the Graduate School.

The defense of the dissertation will be chaired by the student's major professor and attended by all members of the advisory committee. Four of the five members of the advisory committee must approve the student's dissertation and defense and must certify their approval in writing. The results of the defense of the dissertation must be reported to the Graduate School at least one week prior to graduation.

Once the dissertation has been approved by the advisory committee and the final oral examination has been passed, the dissertation must be submitted to the Graduate School for final approval no later than the last day of classes of the following semester. Dissertations which are not submitted by this deadline must be defended again and approved by the Advisory Committee before they will be considered by the Graduate School for final approval.

11. *Binding the Dissertation.* Three official copies of the dissertation must be filed in the University Library for binding. Each copy must carry a certificate of approval signed by the major professor and the dean of the Graduate School.

12. *Other Requirements.* Before the degree will be awarded, the student must file a copy of the abstract of the dissertation (not more than 350 words) with the Graduate School and the library. At the same time, the student must submit a receipt showing that he or she has deposited with the treasurer

of the university the amount of \$50 to cover the cost of microfilming the dissertation. If the student desires to have the dissertation copyrighted, an additional charge of \$35 must be paid. This fee must be presented at the University Library in the form of a certified check or money order made payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. A student must enroll for at least three hours of credit in the semester in which graduation requirements are completed.

Certification of Professional Personnel

The University of Georgia offers graduate programs leading to professional personnel certification at the master's, specialist, and doctoral levels in some 40 different teaching, administrative, supervisory, and school service fields.

The degrees Master of Education and Master of Arts (Education) include both teaching and professional courses for fifth-year certification. Students who complete a Master of Arts degree may meet certification requirements by taking professional courses in education.

A 48 semester-hour program leading to Level 5 certification is available for students holding a baccalaureate degree which meets the teaching field requirements at the Level 4 level in art education, social science education, science education, and language education. The program allows two options, one leading to Level 4 certification upon completion of Phase I courses and subsequently to Level 5 certification, and the other leading directly to Level 5 certification upon completion of the entire program.

Specific course requirements for graduate certification may be obtained by contacting the appropriate department within the College of Education. Applications for certification and appropriate certification tests are available from the Student Services Center, Room G10, Aderhold Hall.

Certificate Programs

Conservation Ecology and Sustainable Development

The University of Georgia offers a certificate in conservation ecology and sustainable development through the Institute of Ecology. Students who earn this certificate will receive interdisciplinary preparation to handle the unique, multi-disciplinary problems associated with working in the area of conservation and sustainable development. Students in the natural sciences will add a social science perspective to their understanding of the ecology of development, and students in the social sciences will learn ecological principles so that their decisions can be grounded in biological fact.

The graduate certificate program requires a student to complete at least 20 hours of credit. The program of study must include four core courses: ECOL 6080, *Principles of Conservation and Sustainable Development I* (3 hrs.); ECOL 6140, *Principles of Conservation and Sustainable Development II* (3 hrs.); a seminar elective in conservation and sustainable development (2 hrs.); and ECOL 8400, *Perspectives on Conservation Ecology and Sustainable Development* (1 hr., repeated two times). The remaining hours of credit (at least 10) will be made up by elective courses selected from a list of approved courses. One or more of these courses may jointly fulfill the requirements in the graduate degree program of their department or school. The graduate student and his/her advisor in the student's academic department plan the program of study to fulfill the requirements of the certificate program.

Any graduate student in a natural science or a social science degree program at the University of Georgia is eligible to apply for admission to the certificate program. Application to the program should be made by filling out an application form available from the Coordinator of the Conservation Ecology and Sustainable Development Program. Applications may be received and acted upon at any time. Acceptance is provisional until the candidate's proposed program of study is approved.

For more information about the program, contact the graduate coordinator in the Institute of Ecology, Ecology Building, (706) 542-2968.

Environmental Ethics

The University of Georgia has a Faculty of Environmental Ethics; a certificate program at the graduate level; and a variety of courses devoted partially or entirely to issues of values and the environment.

The Certificate in Environmental Ethics. This certificate is awarded to graduate students meeting the following requirements: The completion of at least 18 hours of graduate work, including at least 14 hours of graduate course work in approved courses along with an approved research paper in environmental ethics designated for at least three hours of graduate credit. All candidates are required to take the following courses: EETH/PHIL 6220, *Environmental Ethics*; EETH/ECOL 6200, *Ecological Concepts*; ETH/PHIL 6250, *Technology and Values*, EETH/JURI 7870, *Environmental Dispute Resolution*; and EETH 6000, *Environmental Ethics Seminar*, as a common core. In addition, all candidates are required to pass an oral exam.

Other courses may be chosen by the student, with the approval of the graduate coordinator, from a list provided, according to his or her individual interest and career objectives, with the provision that no more than nine hours of course work for credit toward the certificate may be applied from any one academic field. Work on the certificate may be undertaken by any graduate student at the university.

To be admitted to the certificate program, the student must be admitted to the University as a prospective candidate for a graduate degree, a professional degree, or as a nondegree candidate (see General Regulations of the Graduate School Bulletin), and then make application to the graduate coordinator of the Faculty of Environmental Ethics. The nondegree candidate status applies to the person who already holds a master's or doctor's degree from an accredited institution and who wishes to take graduate courses without becoming a candidate for a degree. All prospective recipients of the certificate should be admitted to a school or college of the University and be assigned an advisor. The student and his or her advisor can then plan the program of study that will be a part of the student's application for acceptance into the environmental ethics program. The current graduate coordinator of the Faculty of Envi-

ronmental Ethics is Dr. Peter G. Hartel, Department of Crop and Soil Sciences, (706) 542-0898.

Gerontology

The University of Georgia has a strong commitment to gerontology training. Graduate training in gerontology is directed through the Gerontology Center located in Candler Hall. A graduate certificate of gerontology is awarded by the Gerontology Center. The Georgia Center for Continuing Education also has a gerontology program which provides training in gerontology for continuing education credits.

The Gerontology Center. The major purpose of the Gerontology Center is to coordinate and promote activities throughout the University relating to aging. The center's primary responsibilities are to coordinate graduate training and research and to promote faculty development in gerontology. There is a Faculty of Gerontology associated with the Gerontology Center from 29 departments in 10 colleges and schools on campus. Additionally, the center has a full-time director, Dr. Leonard W. Poon, and Assistant Directors Dr. Everett Lee and Dr. Roger W. Morrell. The Faculty of Gerontology, chaired by Dr. Poon, oversees pre- and post-doctoral training, research and service in the process of aging, as well as the application of knowledge to practice. The center also serves as a liaison between the activities and resources of the University and federal, state, and local funding agencies and interest groups. The Gerontology Center regularly sponsors conferences and speakers on a broad range of topics at the national, regional, and local level.

Graduate Certificate in Gerontology. The Gerontology Center awards a Certificate in Gerontology to graduate students meeting certain requirements. These include the completion of at least 15 semester hours of graduate course work in aging along with three hours of field experience or three hours of research. All candidates are required to take GRNT 6000, a three-hour interdisciplinary seminar in aging. Other courses may be chosen by the students according to their individual interests or career objectives with the provision that remaining courses be directly related to gerontology. To ensure the interdisciplinary nature of the program, students may apply no more than

six semester hours of credit toward certification requirements in any one academic department.

Students must select a track or emphasis for their certificate work. Two tracks are available: research track and practitioner track. Students must take courses from each track with the majority of courses coming from the track in which students select to concentrate for their certificate work. Students who select the research track must either (1) submit a thesis or dissertation completed to meet requirements in their department or (2) complete an individual research project. Students who select the practitioner track are required to complete a practicum in a gerontological setting. Regardless of which track is chosen by the students, their project must be approved by the director or assistant director of the Gerontology Center.

Work on the certificate may be undertaken by any graduate student at the university. Courses that may be applied toward the certificate are found in the following academic units: adult education; cellular biology; child and family development; foods and nutrition; health promotion and behavior; housing and consumer economics; pharmacy; psychology; recreation and leisure studies; social work; and sociology.

To be admitted to the certification program, the student must be admitted to a department of the university at the graduate level either as a prospective candidate for a graduate degree or as a nondegree candidate and then make application to the Assistant Director of Gerontology Center. The nondegree candidate status applies to the person who meets requirements for admission to the Graduate School but who wishes to take graduate courses without becoming a candidate for a degree. The prospective recipient of the certificate should be admitted to a department of the university and be assigned an advisor. The student and his/her advisor can then plan the program of study that will be a part of the student's application for acceptance into the gerontology program.

For further information concerning the Gerontology Center contact Dr. Leonard W. Poon, Chairman of the Faculty of Gerontology and Director of the Gerontology Center. For information about the certificative program or courses available for credit, contact Dr. Roger W. Morrell, Assistant Director of

the Gerontology Center. Both individuals may be reached at (706) 542-3954.

Global Policy Studies

The University of Georgia has a Center for the Study of Global Issues (GLOBIS) which offers a certificate in global policy studies at the graduate level.

GLOBIS explores and develops interdisciplinary and interprofessional programs of instruction, research, and service on a wide range of global issues. It administers undergraduate and graduate certificate programs in global policy studies; sponsors instructional and research-oriented symposia, seminars, lectures, and publications; and serves as a focal point for those interested in foreign languages and international studies both inside and outside the university.

The certificate program in global policy studies is designed to provide students with an international perspective as well as specialized, technical knowledge and skills. Graduate students earn the certificate as a supplement to a regular degree program. The certificate program blends well with disciplines which have traditionally prepared individuals for international service, e.g., business, economics, foreign languages, history, law, and political science. It is also designed for individuals in fields which have not traditionally offered international curricula, such as accounting, agriculture, education, forestry, journalism, nutrition, and plant sciences.

Most new students enrolled in a degree or professional program will find that they can satisfy the certificate requirements with few, if any, additions to their regular program of study. Many departments offer courses which simultaneously meet both certificate and degree requirements. Students applying to the university who are interested in the certificate program should contact GLOBIS for assistance in processing their application.

The requirements for the certificate include 24 semester hours of course work, including a nine-hour core sequence, a nine-hour substantive specialty, a six-hour skill requirement, an internship, and a paper requirement. Certificate students must take a minimum of 18 semester hours of this course work in residence at the University of Georgia.

The core sequence consists of three courses: (1) a course with global scope in the discipline in which the individual plans to

develop his or her substantive specialty; (2) a relevant course in a foreign area or region, such as Africa, Asia, Europe, Latin America, or the Middle East (students who are doing their substantive specialty in a foreign area or region should take this course in a cognate discipline instead); and (3) GPST 6000. This course will cover the planning, implementation, and evaluation of policies designed to deal with global problems, especially development.

The substantive specialty is composed of three courses that constitute a coherent area of concentration relevant to global policy studies. Many of these substantive specialties are identified by discipline, issue, or region, such as economics, development, or African affairs.

The professional skill requirement refers to competence in a foreign language or other relevant research or policy skill. Six hours in a foreign language beyond the 2001 level at the University of Georgia or the equivalent as determined by standardized proficiency tests is required.

The internship requirement consists of practical work experience in a student's chosen area. This requirement may be satisfied by an actual internship course or an equivalent field experience.

There is also a requirement for a substantial paper on a global subject. This paper may be a master's thesis, a doctoral dissertation, or a paper suitable for presentation at a professional meeting.

Finally, certificate students must have at least one of these courses in a second or cognate discipline in addition to the interdisciplinary course in global policy analysis.

For further information concerning the certificate program, write Dr. Markus M. L. Crepaz, Coordinator, The Center for the Study of Global Issues, The University of Georgia, 113 Franklin House, Athens, GA 30602-4240, or call (706) 542-2947, or e-mail mcrepaz@arches.uga.edu.

Historic Preservation Studies

With the passage of the National Historic Preservation Act of 1966, Congress declared historic preservation a part of national policy and authorized various programs to assist in the identification and perpetuation of those cultural resources which represent our national patrimony. Over the past 30 years much progress has

been made in the documentation and preservation of our heritage. This progress has stimulated increased interest in the cultural environment as well as a desire, among many, to achieve a greater understanding of which elements constitute our heritage and how they may be protected for future generations.

Objectives of the Program:

(a) To develop within students an awareness of the contributions which historic resources make to the quality of environments and to the quality of life available to the general populace.

(b) To foster an understanding of historic preservation needs, problems, and opportunities and the role which individual citizens can play in the protection and perpetuation of historic resources.

(c) To prepare students, as citizens within their respective communities, to serve as volunteer members of citizen preservation organizations and/ or government commissions and to provide informed leadership to these and any other community preservation efforts.

(d) To provide students an opportunity to study historic preservation as a part of their academic program or as a supplemental educational opportunity available to graduates.

Curriculum: The certificate program requires a student to complete 18 hours of credit. These must include the nine hours of certificate core requirements with the remaining nine hours to be selected from the historic preservation curriculum. Three hours of the certificate requirements may be satisfied by a preservation-related thesis in the student's academic department. The proposal for these theses must be jointly approved by the graduate coordinator, or major professor, of the student's degree program and the Director of Graduate Studies in Historic Preservation.

For additional information contact John C. Waters, Director of Graduate Studies in Historic Preservation, (706) 542-4706.

Marriage and Family Therapy

The Pre-Professional Graduate Certificate Program in Marriage and Family Therapy is designed to provide an interdisciplinary program for graduate students interested in the applied field of marriage and family therapy. The certificate program involves three units

of the University of Georgia: the College of Education, the College of Family and Consumer Sciences, and the School of Social Work. Completion of the requirements for the certificate program will provide a strong academic basis preparing the student to undertake further supervised clinical training in marriage and family therapy. The certificate program is not intended to provide all the training necessary to function as an independent professional nor to meet all the requirements for (a) state licensure as a marriage and family therapist or (b) clinical membership in the American Association for Marriage and Family Therapy. Graduate courses that may be used to fulfill requirements for the certificate program are offered in several units of the University of Georgia including the Department of Child and Family Development, the Department of Counseling and Human Development, and the School of Social Work.

Any graduate student in the previously mentioned or related programs at the University is eligible to apply for admission to the certificate program. Individuals who do not enter a graduate program of study may enroll in the Marriage and Family Therapy Post-Graduate program for continuing education credit. Contact Trudy Cain, Georgia Center for Continuing Education, Athens, GA 30602-3603, (706) 542-5654.

To be admitted to the Certificate Program in Marriage and Family Therapy, the student must be admitted to the department of the university at the graduate level and then make an application to the Coordinator of the Faculty of Marriage and Family Therapy Certificate Program. The graduate student and his/her advisor in the student's academic department plan the program of study to fulfill the requirements of the certificate program. With appropriate approval, courses in the certificate program may also apply to the degree program in the student's academic department. For master's degree students, the certificate will be awarded upon completion of the certificate requirements and completion of the master's degree program in which the student is enrolled. For students already holding a master's degree, the certificate will be awarded at the end of the semester in which the certificate requirements are satisfied.

For further information concerning the certificate program, contact the Coordinator, Dr. Arthur Horne, Department of Counseling

and Human Development Services, 402 Aderhold Hall, The University of Georgia, Athens, GA 30602-3627, (706) 542-4107.

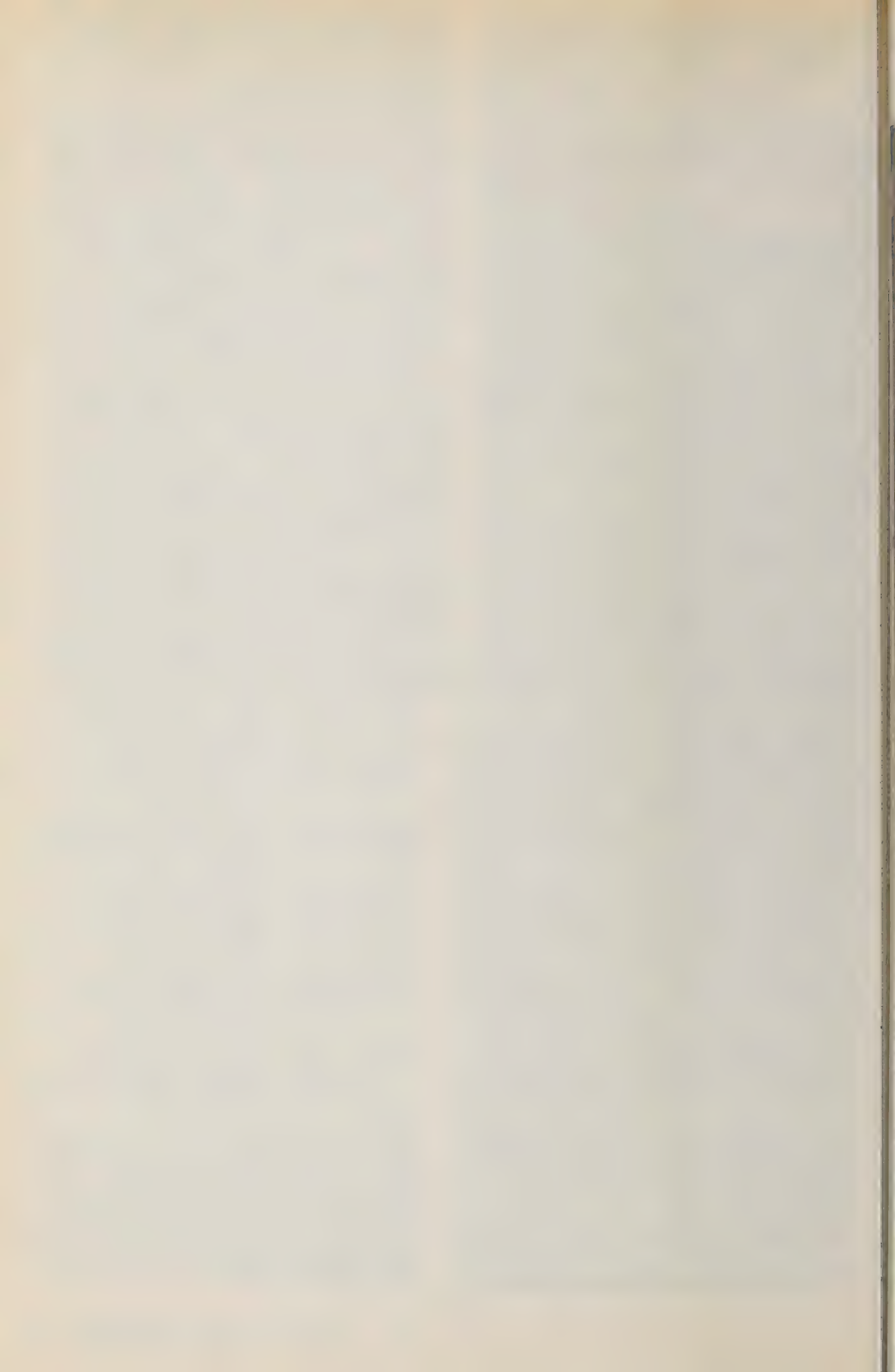
Women's Studies

The Women's Studies Program offers a 15-hour graduate certificate in women's studies. The certificate is available to those students who are pursuing a graduate degree in any of the university's schools or colleges or to those who already hold a graduate degree. The purpose of the certificate is to expose students to the rapidly expanding interdisciplinary scholarship on women which might otherwise be neglected in their traditional curricula.

All certificate candidates are required to take the two following courses: WMST 6010, *Introduction to Feminist Theories*, 3 hours, and WMST 7010, *Women and the Construction of Knowledge*, 3 hours (prerequisite: WMST 6010). A student who has done extensive undergraduate or graduate course work in feminist theory may waive WMST 6010, without credit, and substitute another approved course by petitioning the program. The nine remaining hours may be drawn from the WMST courses listed below, or from courses in other cooperating departments which have been approved by the program:

- | | |
|-----------|--|
| WMST 6120 | Biology and Politics of Women's Reproduction. 3 hours. |
| WMST 6250 | Special Topics in Women's Studies. 3 hours. |
| WMST 7050 | The Political Economy of Gender in Third World Societies. 3 hours. |
| WMST 7060 | Black Women's Narratives. 3 hours |
| WMST 7100 | Lesbian and Gay Studies. 3 hours. |
| WMST 7950 | Directed Research in Women's Studies. 1-3 hours. |
| WMST 8020 | Seminar in Advanced Feminist Theory. 1-3 hours. |

For a complete listing of certificate courses in women's studies and for an application to the certificate program, contact Dr. Patricia Del Rey, Director of Women's Studies or Heather Kleiner, Associate Director, 230K Main Library, Athens, GA 30602-1647, (706) 542-2846.



Course Listings



The College of Agricultural and Environmental Sciences

Gale A. Buchanan, Dean
(Conner Hall)

The research and academic programs in the College of Agricultural and Environmental Sciences focus on training students to meet the needs of agriculture and environmental protection on a regional, national, and international level. The departments within the College offer graduate degrees at the masters and doctorate levels in a variety of fields; additional professional degrees are offered by some departments. These graduate degree programs offer considerable flexibility to meet individual students' interests and backgrounds, so that students can prepare for careers in industry, government, or academia. General information regarding degree programs is available from the College of Agricultural and Environmental Sciences. Details about specific admission or program requirements and options should be discussed with the appropriate department or graduate coordinator listed in this Bulletin.

Agricultural and Applied Economics

Fred C. White, *Acting Head*
Jack E. Houston, *Graduate Coordinator*,
542-0755
(Conner Hall)

Graduate study is offered at both the masters and doctoral levels. The Master of Science (MS) in Agricultural Economics and the Master of Science (MS) in Environmental Economics degrees require 27 hours minimum of course work and three hours of thesis. A Master of Agricultural Economics (MAE) degree consists of a minimum of 36 hours of course work including a technical report in lieu of a formal thesis. The Doctor of Philosophy (PhD) degree consists of a minimum of 63 hours of course work beyond the bachelor's degree, satisfactory performance on written and oral examinations, and a formal dissertation.

Graduate instruction and research may be undertaken in the following areas of specialization: agricultural marketing and consumer demand, agricultural business management, production economics, natural resources and environmental economics, and international trade and development.

Graduate research is coordinated with

the department's overall research program. Students may select a research topic related to the department's current research projects or an approved area of sponsored research. Exceptional computer facilities, software, and support are available for departmental research.

Financial assistance is available to graduate students on a competitive basis in the form of departmental research assistantships. Paid internships are also available from regional and national agribusiness firms.

AAEC 4210/6210. Production Economics: Theory with Applications. 3 hours.

Prerequisite: Undergraduate level only: AAEC 3580-3580L.

Fundamental economic principles in determining efficient adjustments in agricultural resource use consistent with economic growth, and changing technology and economic conditions. Offered fall semester.

AAEC 4510/6510. Farm Appraisal. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

The models of appraisal to farm property, including factors influencing farm land and building values, such as land use, soils, crops, livestock, and buildings. Offered summer semester of odd-numbered years.

AAEC 4710/6710. Rural Economic Development and Growth. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

Inputs and outputs between agriculture and agricultural businesses; analysis of factors affecting development and economic growth in developing areas. Offered fall semester.

AAEC 4800/6800-4800L/6800L. Water Resource Economics. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

The economic aspects of the use, supply, development, and management of water resources with special emphasis on river basin and project planning, benefit-cost analyses, water demands, and multiple use management of water resources. Offered fall semester.

AAEC(FINA) 4870/6870. Futures and Option Markets. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

Development, functions, and importance of futures and option markets. Futures and option contracts; issues such as speculation, the roles of commission houses, commodity exchanges, and clearinghouses; and the use of future contracts as instruments for financing business activities. Technical and fundamental trading theories. Offered fall and spring semesters.

AAEC 4930/6930. Environmental Law and Governmental Regulation. 3 hours.

Not open to students with credit in AAEC(EHSC) 4250.

Regulatory theory, externalities and market failures, definition of key regulations affecting agribusiness, overview of local government law, and delineation of environmental laws relating to agriculture. Current environmental issues are related to statutory, administrative, and regulatory authorities. Offered fall semester.

AAEC 4980/6980. Agribusiness Management. 3 hours.

Prerequisite: Undergraduate level only: (AAEC 2110 or ACCT 2101) and (AAEC 3040 or AAEC 3100).

The basic skills needed to be an effective manager of an agribusiness; applying and integrating these skills into a workable approach to management; provides a step-by-step approach to the application of basic practical management skills in marketing, demand analysis, forecasting, finance, plant operations, and personnel. Offered on a regular basis.

AAEC 6580-6580L. Microeconomics: Theory with Applications. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: AAEC 3580 -3580L or permission of major.

Partial and general equilibrium analyses in the study of efficient resource allocation among households and firms. Perfect and imperfect output and input markets are investigated in terms of economic efficiency. Offered fall semester.

AAEC 6610. Quantitative Techniques in Agricultural Economics. 3 hours.

Prerequisite: STAT 4210 or STAT 6210 or permission of major.

Basic quantitative techniques in agricultural economic theory, emphasizing basic models used in the study of prices, marketing, and production. Offered fall semester.

AAEC 6630. Decision Theory for Resource Allocation. 3 hours.

Prerequisite: AAEC 6580-6580L.

Application of decision theory to natural and economic resources. Linear, nonlinear, and dynamic programming techniques for problems in economic and natural resource allocation. Offered spring semester.

AAEC 6760. Intermediate Agricultural Prices. 3 hours.

Prerequisite: AAEC 6580-6580L and AAEC 6610.

Price theory and statistical techniques that allow the student to advance beyond the introductory level of analyzing agricultural prices. Offered fall semester.

AAEC 6960. International Agricultural Trade. 3 hours.

Prerequisite: AAEC 6580-6580L.

Trade theory and an analysis of agricultural policies among nations. Offered summer semester of even-numbered years.

AAEC 7000. Master's Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

AAEC 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

AAEC 7600. Environmental Economics and Policy Analysis. 3 hours.

Not open to students with credit in AAEC 4650.

Environmental policy in both mathematical and intuitive economics, including externalities, policy instruments, and implementation. Concepts are applied to United States environmental policy toward air and water pollution, hazardous substances, and implementation of environmental law. Offered spring semester.

(AAEC)FORS 7860. Resource Economics and Management. 3 hours.

Prerequisite: AAEC 6580-6580L or ECON 8000.

Economic and physical concepts of scarcity, the impact of market and social factors on resource use, and the optimal management of renewable and nonrenewable resources. Offered spring semester.

AAEC 8000. Special Readings in Agricultural Economics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.
Literature, the concepts and analytical tools for production economics, marketing, or resource economics. Offered fall, spring, and summer semesters.

AAEC 8010. Seminar in Agricultural and Applied Economics. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: AAEC 6580-6580L.
Agricultural policy, production, marketing, development, trade, agribusiness management or natural resources. Theoretical and methodological issues, empirical analyses, and firm/industry/academic policy and other research issues. Non-Traditional Format: Graduate seminar course. Offered fall, spring, and summer semesters.

AAEC 8020. Topics in Agricultural and Applied Economics. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.
Agricultural policy, production, marketing, development, trade, agribusiness management or natural resources. Theoretical and methodological issues, empirical analyses, firm/industry policy, and other issues.

Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

AAEC 8080. Production Economics: Theory and Application. 3 hours.

Prerequisite: AAEC 6580-6580L and AAEC 6610.
Economic theory of production, duality, applications, and modeling. Offered spring semester of even-numbered years.

AAEC 8100. Applied Resource Policy and Project Analysis. 3 hours.

Prerequisite: AAEC 6580-6580L.
Economic analysis of contemporary rural natural resources, environmental policies, and agricultural policies and projects. Application of theory and techniques to local, state, and national problems and issues, particularly those affecting rural areas. Offered fall semester of even-numbered years.

(AAEC)EHSC 8120. Roles and Responsibilities of Environmental Policy Makers. 2 hours.

Prerequisite: Permission of department.
Roles of science, engineering, law, journalism, economics, grass roots activism, and the legislative and regulatory process in the development of environmental policy. Offered spring semester.

AAEC 8140. Consumer Demand Theory. 3 hours.

Prerequisite: AAEC 6580-6580L and (STAT 4220 or STAT 6220).

Theoretical treatment of consumer demand. Utility theory and its assumptions, consumer behavior theory, and problems of application in agricultural and applied economics. Offered spring semester of odd-numbered years.

AAEC 8210. Agricultural Programs and Policy. 3 hours.

Alternative governmental programs and policies as they relate to the solution of specific agricultural problems.

Offered spring semester of odd-numbered years.

AAEC 8300. Agricultural Economics Research. 2 hours.

Methodology, techniques, and guidance for individual research in problems of agricultural economics.

Offered summer semester of odd-numbered years.

AAEC 8400. Agricultural Market Structure and Analysis. 3 hours.

Prerequisite: AAEC 6580-6580L.
The market in economic development and evaluation of structure, conduct, and performance in the United States agribusiness sector. Problems of market coordination and associated policy issues. Offered spring semester of even-numbered years.

(AAEC)ECOL 8700. Environmental Policy and Management. 3 hours.

Evolution, form, and substance of United States federal policies and programs that address ecological problems, focusing on the nature of problems and alternatives for effective resolution. Offered fall semester.

AAEC 8710. Advanced Agricultural Development and Growth. 3 hours.

Prerequisite: AAEC 6580-6580L or ECON 8010.
Major economic problems of the agricultural sector of developing countries and a study of policy instruments which have been used to resolve these problems. Offered summer semester of odd-numbered years.

AAEC 8750. Natural Resource and Environmental Economics. 3 hours.

Prerequisite: AAEC 6580-6580L.
Management of natural and environmental resources. Major theoretical concepts will provide a basis for examination of efficient production and consumption allocation decisions related to natural resources. Emphasis will center on economic, institutional, and legal aspects which prevent private markets from efficiently valuing resources. Offered fall semester of even-numbered years.

AAEC 8760. Topics in Natural Resource and Environmental Economics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: AAEC 6580-6580L.

Classical and contemporary topics in natural resource and environmental economics following a seminar/discussion format. Offered fall semester of odd-numbered years.

AAEC 8800. Dynamic Optimization in Agricultural and Resource Economics. 3 hours.

Prerequisite: AAEC 6580-6580L and ECON 8000 and ECON 8110.

Dynamic optimization and optimal control techniques relevant to agricultural and resource economics. Calculus of variations, the maximum principle, dynamic programming, and both open-loop and closed-loop optimal control. Offered spring semester of even-numbered years.

AAEC 8850. Risk and Uncertainty in Agricultural Decision Making. 3 hours.

Prerequisite: ECON 8020.

Applications of microeconomic theory to measure and assess the impact of risk on firm, consumer, and market decisions and welfare. Evaluation of main sources of risk, including price, production, and technological uncertainty. Identification of firm responses to risk in financing, marketing, insurance, and contractual arrangements. Offered spring semester of even-numbered years.

AAEC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

AAEC 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Agricultural Extension

F. Richard Rohs, *Program Head and Graduate Coordinator, 542-8935 (Lumpkin House)*

The purpose of the graduate program in

agricultural extension is to provide an opportunity for Cooperative Extension Service personnel and others to broaden and strengthen their base of technical knowledge and add the dimension of human and social relations that is essential if one is to perform effectively the duties of a general adult/youth educator within the context of the public service function of the University.

The curriculum leading to the Master of Agricultural Extension (MAEXT) degree focuses on understanding the Cooperative Extension Service and how it works. Individual programs are built around the candidate's need for additional training in appropriate subject matter, human relations, communications, management, Cooperative Extension Service organization and methods, and informal teaching-learning.

Opportunities for study and research are offered in the Department of Agricultural Leadership, Education and Communication, College of Agricultural and Environmental Sciences, other departments and divisions in the College of Agricultural and Environmental Sciences, College of Family and Consumer Sciences, School of Forest Resources, other schools and colleges in the University and in the Cooperative Extension Service.

AEXT 7000. Master's Research. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

AEXT 7020. Program Evaluation. 3 hours.

Identifying and selecting evaluation models, planning an evaluation, collecting and analyzing evaluation data using various qualitative and quantitative methods relating evaluation to program change for agricultural and extension educational programs. Offered every year on a regular basis.

AEXT 7040. Creative Programming for 4-H and Youth. 3 hours.

History, philosophy, and organizational structure of Cooperative Extension 4-H and Youth Education; emphasis upon the needs of youth, teaching, program planning and evaluation methods, the management of volunteers, volunteer leader development, and program and financial re-

sources necessary for 4-H youth work. Not offered on a regular basis.

AEXT 7050. Communication for Agricultural and Extension Educators. 3 hours.

Not open to students with credit in AGRI 5050. Basic communication processes in diverse professional settings: personal interaction, small group, organizational, media. Offered spring semester.

AEXT 7070. Program Development for Agricultural and Extension Educators. 3 hours.

Basic problems, principles, and procedures involved in agricultural and extension program development. Needs assessment, citizen involvement techniques, and instructional design elements. Offered every year on a regular basis.

AEXT 7080. Agricultural and Extension Administration. 3 hours.

Administration and management of agricultural and extension educational programs and people. Four major domains of managerial activity; administrative, communications, supervision, and cognitive areas. Offered fall semester.

AEXT 7100. Practicum in Cooperative Extension. 3 hours. Repeatable for maximum 6 hours credit. One 3- hour lab period.

Prerequisite: Permission of department. Students gain experience in leadership roles in the Cooperative Extension Service by working with current leaders in a learning laboratory situation. Offered fall, spring, and summer semesters.

AEXT 7110. Special Problems in Agricultural Extension Education. 3 hours.

Prerequisite: Permission of department. Specialized problems and training appropriate to the needs of the individual and associated with agricultural extension education will be studied to develop greater facility in the application of specific agricultural subject matter. Offered fall, spring, and summer semesters.

AEXT 7210. Problem Analysis in Agricultural Extension Work. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. A topic or problem in Cooperative Extension significant to the candidate's area of work. Non-Traditional Format: Special problems course; faculty and students meet as needed. Offered fall, spring, and summer semesters.

Agriculture

EETH(AGRI) 4190/6190. Agricultural Ethics. 1 hour. One 2-hour lab period.

Ethical issues in agriculture. Topics include animal rights/animal welfare, agriculture as a business/agriculture as a way of life, sustainable agriculture, (bio)technology, migrant farm workers, foreign aid, world hunger, and related topics. Offered fall and spring semesters.

Animal and Dairy Science

Larry L. Benyshek, *Head*
George B. Rampacek, *Graduate Coordinator, 542-1852*
(Livestock-Poultry Building)

The Doctor of Philosophy degree in animal and dairy science is offered with the opportunity to specialize in animal breeding, nutrition, physiology of reproduction, meats and muscle biology, and animal production. The program leading to the PhD degree in animal nutrition is also available to animal and dairy science students.

Graduate programs leading to the Master of Science degree in either animal science or dairy science are offered in all general areas of animal and dairy science. These programs are flexible enough to interest students who may want to consider the MS degree as a terminal degree and are also designed to accommodate those graduates who want to use the MS degree as a preparatory step toward the PhD degree. Courses in the department and appropriate courses in poultry science, biochemistry, statistics, microbiology, veterinary physiology, and other departments provide in-depth training and laboratory experience. Amino acid analyzers, gas-liquid chromatographs, a flame spectrophotometer, a gas flow Gieger tube detector, a whole body counter, an atomic absorption spectrophotometer, a sonoscope, a high pressure liquid chromatograph, liquid scintillation counters, gamma counters, ultracentrifuge,

enzyme kinetic spectrophotometer, scanning and transmission electron microscopes, electrophoresis equipment, tissue culture incubators and other equipment are available for use in teaching and research. Research facilities include laboratories equipped to handle radioisotopes and many chemical and biological analyses, small and large animal metabolism rooms and equipment, large animal surgery laboratory, and research facilities on swine, horse, beef cattle, and dairy cattle farms located near the campus and in the state. Service of the University Computer Center is available for data processing.

Prospective students who desire financial aid may apply for assistance directly to the animal and dairy science department. A limited number of teaching and research assistantships for training students in both research and teaching and assistance to the faculty are available. Other assistantships are available through the Graduate School and application for these should be made directly to the graduate coordinator. Additional courses related to animal nutrition are listed under animal nutrition.

ADSC 4100/6100. Advanced Genetics of Livestock Improvement. 3 hours.

Prerequisite: ADSC 3110 or permission of department.

The development of practical and genetically sound programs involving the study and application of genetic principles underlying selection, systems of mating, and performance testing. Major emphasis will be on characters of economic importance in meat animals. Not offered on a regular basis.

(ADSC)FDST 4140/6140-4140L/6140L. Advanced Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L and FDST 4040/6040-4040L/6040L.

Meat processing and technology, scientific basis for meat as a food, USDA and FDA regulations governing meat processing, and the latest innovations in commercial meat processing. Offered spring semester.

ADSC 4150/6150. Microbial Ecology of the Rumen. 3 hours.

Prerequisite: BCMB 4020/6020 or MIBO 4090/6090 or permission of department.

The rumen microbial ecosystem that will examine the biochemistry, ecology, nutrition, physiology, and taxonomy of rumen microorganisms. The symbiotic relationship between rumen microor-

ganisms and the nutrition of the ruminant animal. Manipulation of rumen fermentation to maximize host-animal production.

Offered spring semester of odd-numbered years.

(ADSC)ANNU 4360/6360. Ruminant Nutrition. 3 hours.

Prerequisite: ADSC 3300-3300L and BCMB(BIOL)(CHEM) 3100.

Digestive physiology and metabolism of the rumen. Treats systematically the diversity of function, complex symbiotic relationships of the rumen microflora/microfauna, and the physiology and metabolism of the rumen as related to digestion, absorption, and utilization of nutrients. Offered every year on a regular basis.

(ADSC)ANNU(POUL) 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM) 3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine. Offered fall semester.

ADSC 4400/6400-4400L/6400L. Applied Reproduction in the Horse. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ADSC 3400-3400L.

Management of reproduction in the horse for efficient production. Application of reproductive management systems. Offered spring semester.

ADSC 4410/6410-4410L/6410L. Applied Reproductive Management in Cattle and Swine. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ADSC 3400-3400L.

Management of reproduction in farm animals for efficient livestock production. Application of reproductive management, principles associated with artificial insemination, embryo transfer, pregnancy detection, semen collection, and reproductive record management. Offered fall semester.

ADSC 6110-6110L. Experimental Methods in Animal Biotechnology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or MIBO 3500 or permission of department.

Laboratory methods in molecular biology stressing recombinant DNA techniques. Experiments will include recombination, cloning, restriction analysis techniques, and optional experiments chosen by students. Offered spring semester.

ADSC(FDST) 6170-6170L. Experimental Techniques in Meat Science and Muscle Biology. 3 hours. Two 3-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or STAT 4220 or STAT 6220 or permission of department.

Basic methods in laboratory techniques in meat science. Experiments will familiarize students from a wide variety of backgrounds with a number of laboratory techniques, including lipogenesis,

muscle histology, enzyme kinetics, and muscle metabolism. Offered spring semester of odd-numbered years.

ADSC(FDST) 6890. Advanced Meat Science. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or permission of department.

The theories and methods used in meat science in determination of tissue growth; compositional techniques; muscle protein and lipid organization, structure, and function; biochemical conversion of muscle to meat, and its impact on meat quality and palatability in meat animals. Offered fall semester of even-numbered years.

ADSC 7000. Master's Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ADSC 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ADSC 8090. Introduction to Quantitative Genetics of Livestock Improvement. 2 hours.

Prerequisite: ADSC 3110 and (STAT 4220 or STAT 6220).

The population genetic theory associated with livestock populations and their quantitative genetic improvement. Offered summer semester of even-numbered years.

ADSC 8100. Statistical Methods in Animal and Dairy Science. 3 hours.

Prerequisite: [(STAT 4220 or STAT 6220) and ADSC 8110] or permission of department.

Experimental designs and statistical procedures particularly applicable to animal research with emphasis on multiple regression and least squares analysis. Offered spring semester of odd-numbered years.

ADSC 8110. Advanced Quantitative Genetics of Livestock Improvement. 3 hours.

Prerequisite: STAT 4220 or STAT 6220.

Advanced study of population and quantitative genetics. Offered fall semester of even-numbered years.

ADSC 8200. Computational Techniques in Animal Breeding. 3 hours.

Prerequisite: ADSC 8100 or permission of department.

Computing algorithms useful for analysis of very large data sets in animal breeding. Class involves

several programming projects and case studies on field data sets. Offered spring semester of odd-numbered years.

ADSC 8210. Advanced Statistical Methods in Animal Breeding. 3 hours.

Prerequisite: ADSC 8200 or permission of department.

Latest statistical and computing procedures useful in animal breeding. Includes nonlinear models, Bayesian methods, and methods useful for analysis of molecular marker information. Offered fall semester of even-numbered years.

ADSC 8400. Advanced Animal Reproduction. 3 hours.

Prerequisite: ADSC 3400-3400L.

Physiological mechanisms associated with reproduction in farm animals, including the reproductive endocrine system, the mechanism of hormone action and hormone measurement, and follicular development through parturition. Offered spring semester of even-numbered years.

ADSC 8700. Special Problems in Animal and Dairy Science I. 3 hours.

Prerequisite: Permission of department.

Library and laboratory problems dealing with different phases of livestock production.

Non-Traditional Format: This course provides the students opportunities to work with professors at non-scheduled hours. Offered fall, spring, and summer semesters.

ADSC 8710. Special Problems in Animal and Dairy Science II. 3 hours.

Prerequisite: Permission of department.

Library and laboratory problems dealing with different phases of livestock production.

Non-Traditional Format: This course provides students the opportunity to work with professors at non-scheduled hours. Offered fall, spring, and summer semesters.

ADSC 8800. Graduate Seminar. 1 hour. Repeatable for maximum 4 hours credit. One 1-hour lab period.

Prerequisite: Permission of department.

Weekly meetings devoted to discussion of research problems. Offered fall, spring, and summer semesters.

ADSC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ADSC 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Animal Nutrition

Gene M. Pesti, *Graduate Coordinator*,
542-1351
(Livestock-Poultry Building)

This program is interdepartmental, including the Departments of Animal and Dairy Science, and Poultry Science. It embraces both the basic and applied phases of nutrition including the metabolism, biochemistry, and physiology of minerals, lipids, carbohydrates, proteins, vitamins, etc., in monogastric and ruminant animals. Strong collateral support, through course offerings and research cooperation, also is available in the areas of biochemistry, physiology, genetics, statistics, veterinary medicine, and microbiology. Facilities for research include adequately equipped nutritional, biochemical, and physiological laboratories, experimental animal quarters for many farm and laboratory species and instrumentation for many types of metabolic studies including, for example, the use of isotopes. The goal is to provide a challenging program, supplying opportunity for students to develop their creative ability to the point where their knowledge and motivation will enable them to make major contributions and assume leadership in the nutrition profession.

ANNU(ADSC) 4360/6360. Ruminant Nutrition. 3 hours.

Prerequisite: ADSC 3300-3300L and BCMB (BIOL)(CHEM) 3100.

Digestive physiology and metabolism of the rumen. Treats systematically the diversity of function, complex symbiotic relationships of the rumen microflora/microfauna, and the physiology and metabolism of the rumen as related to digestion, absorption, and utilization of nutrients.

Offered every year on a regular basis.

ANNU(ADSC)(POUL) 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: [ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM) 3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine.

Offered fall semester.

ANNU 8310. Bioenergetics in Animal Nutrition. 2 hours.

Prerequisite: BCMB 4010/6010.

Energy transformations in animals including application of thermodynamic principles to the conservation and conversion of energy in animals. The energy values of feedstuffs as determined by various methods will be evaluated.

Offered fall semester of odd-numbered years.

ANNU 8320. Vitamins in Animal Nutrition. 2 hours.

Prerequisite: BCMB 4010/6010.

The chemistry and physiology of the vitamins and their roles in animal metabolism including cellular biochemistry and physiology of the vitamins.

Offered spring semester of even-numbered years.

ANNU 8330. Minerals in Animal Nutrition. 2 hours.

Prerequisite: BCMB 4010/6010.

Significance of minerals in animal nutrition with emphasis on the physical and chemical principles and dynamic behavior and function of individual elements in the organisms as a whole.

Offered fall semester of even-numbered years.

ANNU 8340. Proteins and Amino Acids in Animal Nutrition. 2 hours.

Prerequisite: BCMB 4010/6010.

Metabolism and utilization of dietary proteins and amino acids; methods of supplying amino acids for efficient utilization for maintenance, growth and the production products; evaluation of the quality of proteins to meet requirements; methods for separation of proteins, amino acid analysis and determination of protein quality will be studied.

Offered spring semester of even-numbered years.

ANNU 8350. Carbohydrates and Lipids in Animal Nutrition. 2 hours.

Prerequisite: BCMB 4010/6010.

The utilization and metabolism of carbohydrates and lipids by animals; biological properties of carbohydrate and lipid foods and their effects on absorption and metabolism of the nutrients of the animal diet will be evaluated.

Offered spring semester of even-numbered years.

ANNU 8380. Experimental Methods in Animal Nutrition. 3 hours. One lecture and two 3-hour lab periods.

Prerequisite: CHEM 2211 and CHEM 2211L.

Biochemical nutrition methodology and its utilization in performing experiments, recording and interpreting data, and writing scientific reports.

Offered spring semester.

ANNU 8390. Nutrition Seminar. 1 hour. Repeatable for maximum 4 hours credit. One 1-hour lab period.

Current problems and papers of scientific work in animal nutrition.

Offered spring semester.

ANNU 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members.

Non-Traditional Format: Independent research under the direction of a faculty member.

Offered fall, spring, and summer semesters.

ANNU 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor.

Non-Traditional Format: Independent research and preparation of the doctoral dissertation.

Offered fall, spring, and summer semesters.

Biological and Agricultural Engineering

E. Dale Threadgill, *Head*

Brahm P. Verma, *Graduate Coordinator*,
542-0860

(Driftmier Engineering Center)

The Department of Biological and Agricultural Engineering offers programs of study leading to three degrees: MS with major in Biological Engineering, MS with major in Agricultural Engineering and PhD in Biological and Agricultural Engineering. Students can focus on several fields of interest that include biochemical engineering, enzyme engineering, biosensors, biomechanics, bioprocessing, image analysis, artificial intelligence applications, decision support systems, electronics and controls, X-ray computed tomography, NMR spectroscopy, postharvest engineering, applied electronics, food engineering, crop modeling, agrometeorology, environmental quality, water quality, soil and water engineering, biore-source conversion, and precision farming.

The department has 38 full-time faculty and more than 50 research projects housed in three units located at the Athens, Griffin, and Tifton campuses of the University. The principal facilities for academic instruction are located in the Driftmier Engineering Center on the Athens campus. Excellent research facilities and specialized modern laboratories are available not only on the Athens campus but also at the Griffin and Tifton campuses. The three locations provide exceptional opportunities for laboratory and field research under diverse environmental conditions. In addition, the department has aggressive interdisciplinary research programs with other departments in the College of Agricultural & Environmental Sciences, Division of Biological Sciences and College of Veterinary Medicine.

The department accepts applications from graduates with a BS or a MS degree in engineering, physics, chemistry, biological sciences, mathematics, food science, and agricultural sciences. Qualified applicants with a non-engineering degree are required to complete a prescribed set of undergraduate engineering science courses.

A candidate for a MS degree is required to complete 24 semester hours of course credit and 6 hours of thesis research. The primary goal of this course of study is to have the candidate acquire a) deeper understanding in the selected field of knowledge, b) ability to synthesize knowledge, c) rational problem solving skills, and d) confidence in conducting independent work.

The PhD course of study is designed to achieve proficiency in unifying the diverse knowledge bases of the biological, agricultural, physical, social, and engineering sciences to enable the student to lead in the discovery of engineering solutions critical to the development of complex biological and agricultural systems. The department places high value on advanced proficiency in mathematics, statistics, selected area(s) of science, and knowledge of research methods. The selection of courses must be guided to have the student acquire a) in-depth knowledge in selected area(s) of science, b) ability to integrate diverse knowledge, c) creative thinking ability for defining problems, and d) ability to conduct original research.

The department provides research and teaching assistantships to qualified candidates based on availability of funds. Applicants desiring financial assistance should apply directly to the Graduate Coordinator of the department by January 31. Applications from under-represented groups are highly encouraged.

ENGR 4210/6210. Linear Systems. 3 hours.

Prerequisite: ENGR 2170.

Time and frequency domain analysis of linear systems, convolution, fourier series, and fourier transforms with applications. Offered spring semester.

ENGR 4220/6220. Feedback Control Systems.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 4210/6210.

The analysis and design of continuous and discrete time, and linear feedback control systems. Offered fall semester.

ENGR 4230/6230. Sensors and Transducers.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2170.

Fundamentals of the sensing process, transducers and their environments and the measurement problem. Transducer types and modeling. Displacement, motion, pressure, fluid-flow, temperature measurements. Offered fall semester.

ENGR 4250/6250. Advanced Microcontrollers.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3270 and ENGR 4240.

Using the MC68HCII to solve practical engineering monitoring and control problems. A project-oriented course. Offered fall semester.

ENGR 4280/6280. Measurement Automation

and Control. 3 hours. Two lectures and one

2-hour lab period.

Prerequisite: ENGR 1140 and ENGR 2170.

The analysis, design, and programming of systems used for automatic data acquisition, measurement, and control. Offered spring semester.

ENGR 4350/6350. Introduction to Finite Element Analysis. 3 hours.

Prerequisite: ENGR 2140 and MATH 2700.

Fundamental finite element theory for the solution of engineering problems. Geometrical modelling techniques, element selection, and tests for accuracy. Emphasis on problems in structural mechanics and elasticity. Offered fall semester.

ENGR 4360/6360. Advanced Topics in CAD/CAM. 3 hours.

Prerequisite: ENGR 3300.

The use of computer aided design/computer aided manufacturing. Computer modeling of solid objects, advanced mechanism modeling, rapid prototyping and virtual reality. Offered spring semester of odd-numbered years.

ENGR 4370/6370. Material Science and Experimental Stress Analysis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3300.

Properties and selection of engineering materials. Structure of solids and the effects of solidification, forming and heat treating operations on material properties. Measurement of stresses in materials using strain gage and photoelastic technology. Offered fall semester of even-numbered years.

ENGR 4420/6420. Industrial Ventilation Design and Control. 3 hours.

Prerequisite: ENGR 2150 and ENGR 3150.

Engineering design of industrial ventilation systems including selection of fans, ductwork, diffusers, hoods, air cleaners, and humidifiers. Offered spring semester.

ENGR 4440/6440. Environmental Engineering I. 3 hours.

Prerequisite: ENGR 3410 and ENGR 3440.

Engineering science and design related to treatment of drinking water and wastewater as well as the treatment and ultimate disposal of the sludges created during water treatment. Offered fall semester.

ENGR 4450/6450. Environmental Engineering II. 3 hours.

Prerequisite: ENGR 3520 and ENGR 4440/6440 and ENGR 4480/6480.

Engineering science and design related to environmental modeling, solid waste management, and hazardous waste management. Concepts of risk assessment will also be introduced. Offered spring semester.

ENGR 4480/6480. Instrumentation for Environmental Quality. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MATH 2700 and PHYS 1212-1212L.

Operation of instrumentation used to measure physical variables which determine environmental quality. The engineering design and application of measuring systems for airborne particulates, gaseous atmospheric contaminants, solar and environmental radiation, and noise will be emphasized. Offered fall semester.

ENGR 4510/6510. Engineering and Design of Biological Processes I. 3 hours.

Prerequisite: ENGR 3520 and BCMB 4010/6010 and MIBO 3500.

Design and analysis of enzymatic and microbial biological reaction systems. Offered fall semester.

ENGR 4520/6520. Engineering and Design of Biological Processes II. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ENGR 4510/6510.

Unit operations used for biological processing including filtration, centrifugation, cell disruption, isolation, purification, and polishing. Offered fall semester.

ENGR 4530/6530. Monitoring and Control of Biological Processes. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ENGR 4510/6510.

Concepts of biological process controls; modern control techniques and optimization of batch, fed-batch and continuous bioreactors, and other biological systems. Offered spring semester.

ENGR 4540/6540. Applied Machine Vision. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Automated vision systems to identification, measurement and quality control. Electromagnetic spectrum, illumination design, imaging sensor election, vision system calibration. Implementation of image processing algorithms for object recognition and classification. Offered spring semester of even-numbered years.

ENGR 4550/6550. Processing Plant Design. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3540.

Design of systems for processing, primarily based upon unit operations processes. Process simulation or modeling for optimization purposes will be applied to processing systems. Plant layout required for processing will be included. Offered fall semester.

ENGR 4740/6740. Biomaterials. 3 hours.

Prerequisite: BIOL 1108-1108L and ENGR 2140.

Biomaterials and groundwork for topics such as biomechanical, chemical, and thermal properties of replacement materials and tissues. Implantation of materials in the body is studied for the biological point of view. Offered fall semester of even-numbered years.

ENGR 4760/6760. Biomechanics. 3 hours.

Prerequisite: BIOL 1108-1108L and ENGR 2130 and ENGR 2140.

The application of engineering principles to body dynamics is discussed. The student should understand the mechanics of the musculoskeletal system. A term design project is required. Offered fall semester of odd-numbered years.

ENGR 5930/7930. GPS with Engineering and GIS Applications. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: ENGR 1120 or GEOG 4370/6370-4370L/6370L.

The Global Positioning System, Differential GPS, and Real Time Kinematic GPS. Applications of GPS to engineering and geographic information systems. Offered fall semester.

ENGR 6110. Momentum and Heat Transport Processes. 3 hours.

Prerequisite: (ENGR 3140 and ENGR 3150 and MATH 2700) or permission of major.

Transport processes with an emphasis on fluid mechanics and heat transfer, transport of momentum and energy in continuous media, introduction to approximate solutions. Offered every year on a regular basis.

ENGR 6130. Bioengineering Systems. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (MATH 2700 and PHYS 1212-1212L) or permission of major.

Integrating physics, mathematics, engineering, and chemical and biological principles for analysis of plant and animal systems. Offered fall semester.

ENGR 6410. Open Channel Hydraulics and Sediment Transport. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Fundamental mass, energy, and momentum transport relations in water flows open to the atmosphere. Channel design and measurement of flows in natural channel. Sediment transport relations are introduced. Not offered on a regular basis.

ENGR 6580. Directed Readings in Bioconversion Engineering. 3 hours. Two 2-hour lab periods.

Prerequisite: (CHEM 2100 and CHEM 2100L and MIBO 3500 and MATH 2700 and ENGR 3140) or permission of major.

Quantitative description of aerobic, facultative, and anaerobic fungal/microbial modes for bio-transformation of organic compounds in natural and controlled environments, with emphasis on mathematical representation of mechanisms involved and mechanisms manipulation. Non-Traditional Format: Independent study. Students will work in the bioconversion lab for two hours per week and they will meet and lecture weekly on weekly topics. Not offered on a regular basis.

ENGR 6630. Advanced Strength of Materials. 3 hours.

Prerequisite: ENGR 2140.

Advanced topics in strength of materials. Determining the stress and strain on members under non-linear loading. Offered every even-numbered year on a regular basis.

ENGR 6910. Research Methods. 2 hours.

Prerequisite: Permission of department.

The philosophy of engineering research, research methodology, review of the departmental research programs, and writing and presenting thesis and dissertation proposals and grant proposals. Offered fall semester.

ENGR 6920. Engineering Design. 3 hours. One 4-hour lab period.

Prerequisite: Permission of department.
Fundamentals of engineering design, problem selection, and application of design principles to a supervised project. Non-Traditional Format: A detailed design project will be required. Students will conduct hands-on activities for experimenting and the fabrication of design. Offered spring semester of even-numbered years.

ENGR 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.
Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENGR 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.
Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ENGR 7430. Nonpoint Source Modeling. 3 hours.

Prerequisite: MATH 2200-2200L and PHYS 1111-1111L and CHEM 1212 and CHEM 1212L.

Watershed systems, hydrologic processes and pollutant transport processes; structure and capabilities of current watershed computer models; "hands-on" use of some current watershed models; and written and oral reports on the model application to an example watershed. Offered summer semester of odd-numbered years.

ENGR 8250. Advanced Control Systems. 3 hours.

Prerequisite: ENGR 4220/6220 or permission of major.

Advanced control techniques. Practical aspects of control design. Not offered on a regular basis.

ENGR 8290. Advanced Instrumentation. 3 hours. Three 2-hour lab periods.

Prerequisite: ENGR 4230/6230 or permission of major.

The use of sensors and advanced instrumentation in engineering research applications. Not offered on a regular basis.

ENGR 8420. Theory of Drainage - Saturated Flow. 3 hours.

Prerequisite: (MATH 2700 and CRSS 4600/6600-4600L/6600L) or permission of department.

The theory of saturated water flow in porous media. Steady and unsteady flow will be considered. Applications to agricultural drainage and well hydraulics will be discussed. Offered summer semester of even-numbered years.

ENGR 8550. Non-Destructive Characterization of Biological Materials. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 6130.

Techniques for non-destructive characterization of biological materials or systems. Topics may vary from year to year. Offered every even-numbered year on a regular basis.

ENGR 8580. Compost Facility Engineering. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 6580 or permission of major.
Factors impacting the design and operation of large scale composting facilities. Not offered on a regular basis.

ENGR 8930. System Simulation. 3 hours.

Prerequisite: Permission of department.

Solution of engineering/management problems in biological and agricultural systems through computer modeling and simulation of continuous-time and discrete-event systems. Deterministic and stochastic systems will be considered. Introduction to system stability and optimization concepts. Offered spring semester.

(ENGR)CSCI 8940. Computational Intelligence. 4 hours.

Prerequisite: CSCI(PHIL) 4550/6550 or permission of department.

Programs that solve complex problems in a particular domain, typically independent of knowledge used to direct the search for an optimal solution. Approaches include simulated annealing, genetic algorithms, neural networks. Offered spring semester.

ENGR 8950. Graduate Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Presentations/discussions related to engineering research, teaching, design, and service presented by students, faculty, and industry leaders. Offered spring semester.

ENGR 8980. Advanced Topics in Biological Engineering. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Advanced directed readings in special topics in biological engineering in an area(s) of interest to the student.

Non-Traditional Format: Students will be required to study advanced topics on the area and provide written and oral summaries. Additionally, students will be given special assignments such as leading several discussion sessions and extended written and oral reports on the state-of-the-art knowledge of a topic. Offered fall and spring semesters.

ENGR 8990. Advanced Topics in Agricultural Engineering. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Advanced directed readings in special topics in agricultural engineering in an area of interest to the student.

Non-Traditional Format: Students will be required to study advanced topics on the area and provide written and oral summaries. Additionally, students will be given special assignments such as leading several discussion sessions and extended written and oral reports on the state-of-the-art knowledge of a topic. Offered fall and spring semesters.

ENGR 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. **Non-Traditional Format:** Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENGR 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. **Non-Traditional Format:** Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Crop and Soil Sciences

Albert E. Smith, Jr., *Head*

David E. Radcliffe, *Graduate Coordinator*,
542-0897

(Plant Sciences Building)

Graduate training leading to the MS and PhD degrees is available in all phases of crop and soil sciences including international and sustainable agriculture. In-depth instruction and research are emphasized in both crop and soil science. Areas of major specialization in crop science are: plant breeding and genetics, physiology, weed control, crop production and management, and forage quality and utilization. Areas of major specialization in soils are: chemistry, physics, environmental physics, classification and genesis, soil erosion and conservation, fertility and plant nutrition, microbiology and mineralogy. A range of environmentally-oriented research opportunities are available within the crop and soil science areas. Facilities for graduate training

include three well-equipped Experiment Stations (housing modern analytical equipment, growth chambers, greenhouses and field plot facilities), along with seven field research centers located throughout the state. Cooperative studies are encouraged with other departments at the University, with the Institute of Ecology and the Savannah River Ecology Laboratory, and with federal research laboratories in the area (USDA/ARS, EPA). Cooperative projects with scientists at the Volcani Center in Israel are also available.

Departmental requirements include attendance at graduate seminars. Coursework and research topics are individually determined in consultation with the student's advisory committee.

Students with strong backgrounds in biological, geological, physical, chemical, or environmental sciences are encouraged to apply as prospective candidates for graduate training.

CRSS 4040/6040. Plant Breeding. 3 hours.

Prerequisite: PGEN 3580-3580L or permission of major.

Fundamental principles and theories utilized in the science of plant breeding and cultivar development and the role breeding plays in crop improvement. Offered every year on a regular basis.

CRSS 4220/6220. Topics in Crop and Soil Sciences. 1-3 hours. Repeatable for maximum 12 hours credit.

Topics and methods in Crop and Soil Sciences with a different timely topic each semester, including new areas of inquiry in crop and soil sciences. **Non-Traditional Format:** This course provides students with exposure to evolving areas of crop and soil sciences. Credit hours are variable based upon topic covered in a particular semester. Offered fall, spring, and summer semesters.

(CRSS)ENTO 4250/6250-4250L/6250L. Pesticide Management and Utilization. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L and [(CHEM 2100 and CHEM 2100L) or (CHEM 2211 and CHEM 2211L)].

Practical management and utilization of pesticides in urban and agricultural environments. Subject areas include classification of insecticides, herbicides, and fungicides, etc., their general chemical and toxicological properties, deployment philosophy, hazards and environmental impact, formulation and application, safety and disposal, and management of pesticide resistance. Offered spring semester.

CRSS 4260/6260. Forage Management and Utilization. 3 hours.

Prerequisite: CRSS 2010-2010L or permission of department.

Characteristics of forage species; establishment, physiology, and morphology effects on management; forage quality and utilization by livestock; grazing management; hay and silage; forages for wildlife and conservation. Offered every year on a regular basis.

CRSS 4300/6300. Crop Production and Management. 3 hours.

Prerequisite: (CRSS 3050-3050L and CRSS 3300) or permission of department.

Conventional and alternative crop management systems, principles, and practices of crop science are used in discussion of management problems related to agronomic crops grown in Georgia. Offered every year on a regular basis.

CRSS 4340/6340-4340L/6340L. Weed Science.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (BIOL 1107-1107L and CHEM 1211 and CHEM 1211L) or permission of department.

Fundamentals of weed biology; cultural and chemical weed control; properties and uses of herbicides and herbicide application equipment; and current systems for weed management in cropping programs. Offered fall semester.

CRSS 4370/6370. Heavy Metals in the Environment. 1 hour.

Prerequisite: (CHEM 1212 and CHEM 1212L and (CRSS 3050-3050L or CRSS(FORS)3060-3060L)) or permission of major.

The natural level and sources of, and human activity affecting, the heavy metal composition of soils and plants, and their potential hazards to plant life and introduction into the food chain. Offered on a regular basis.

CRSS 4400/6400. Crop Ecology. 3 hours.

Prerequisite: CRSS 2010-2010L or BTNY 1210-1210L or permission of major.

World population growth and food production problems; origin, distribution, and adaptation of tropical, subtropical, and temperate crop plants as influenced by environment with emphasis on climatic factors. Offered every year on a regular basis.

(CRSS)(BIOL)BTNY 4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL) 3204.

Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems. Offered every year on a regular basis.

CRSS 4520/6520. Field Soil and Site Assessment. 3 hours.

Prerequisite: (CRSS 4540/6540-4540L/6540L and CRSS 4600/6600-4600L/6600L) or permission of department.

How to assess a site to determine if the soil places any limitations on land use. Topics covered include soil sampling, soil landscapes, wetland and hydric soils, septic systems, and land application of waste. Offered every year on a regular basis.

CRSS 4540/6540-4540L/6540L. Pedology.

3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L or permission of department.

Soils as a natural component of the ecosystem, including morphology, landscape distribution, formation, identification of diagnostic horizons and features, and classification. Non-Traditional Format: A one-day trip to North Georgia and a two-day trip to the Coastal Plain will be required at student's expense. Offered every year on a regular basis.

CRSS 4590/6590-4590L/6590L. Soil Fertility.

4 hours. Three lectures and one 2-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS (FORS)3060-3060L or permission of major.

Soil conditions affecting availability of plant nutrients; methods of determining soil fertility and insufficiency of plant nutrients in soils, and interpretation of chemical and biological measurements as related to fertility maintenance and good soil management. Offered spring semester.

CRSS 4600/6600-4600L/6600L. Soil Physics.

4 hours. Three lectures and one 2-hour lab period.

Prerequisite: [(CRSS 3050-3050L or CRSS (FORS) 3060-3060L) and MATH 2200-2200L and (PHYS 1111- 1111L or PHYS 1211-1211L)] or permission of major.

Physical properties and process of soils. Water, heat, and solute movement in soils. Offered every year on a regular basis.

CRSS(MIBO) 4610/6610-4610L/6610L. Soil Microbiology. 3 hours.

One lecture and two 2-hour lab periods.

Microorganisms in soil and their effect on nutrient recycling, especially as it relates to environmental quality and crop production. Offered every year on a regular basis.

CRSS 4660/6660-4660L/6660L. Chemical Analysis of Environmental Samples. 3 hours.

Two lectures and one 3-hour lab period.

Prerequisite: CHEM 2300 and CHEM 2300L.

Analysis of soils, sediment, rocks, water for important organic and inorganic contaminants. Chromatography, atomic adsorption, and plasma emission spectroscopy, field sampling and measurements. Quality assurance/quality control,

data reporting, computer use in analysis. Offered every year on a regular basis.

CRSS 4670/6670. Environmental Soil Chemistry. 3 hours.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L or permission of department.

Environmental soil chemistry applies and extends the concepts of chemistry and physics to the investigation of problems related to the physical, chemical, and biological characteristics of soil and their importance in relation to the management of contaminants, pesticides, and production inputs. Offered fall semester.

(CRSS)ECOL 6650-6650L. Soil Biology and Ecology. 4 hours. Two lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or CRSS 4590/6590-4590L/6590L or CRSS(MIBO) 4610/6610- 4610L/6610L.

Organisms in the soil environment, with emphasis on macrobiota and their functional roles in food webs and ecosystem processes. Offered fall semester of even-numbered years.

CRSS 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a masters degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CRSS 7050. Principles of Field Crop Production. 3 hours.

Prerequisite: [CRSS 3300 and CRSS 4300/6300] or permission of department.

Effect of environment and heredity on crop production, including light, temperature, water, fertility, and other factors affecting plant growth and management. Not offered on a regular basis.

CRSS 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CRSS 8000. Soil Physical Chemistry. 3 hours.

Prerequisite: [CHEM 3100 or (CHEM 2300 and CHEM 2300L)] and [CRSS(FORS) 3060-3060L or GEOL 1250- 1250L] or permission of department.

Physical and surface chemistry applied to soil-water systems. Topics include precipitation-dissolution, redox chemistry, complexation, structure of soil-water interface, adsorption mechanisms, use of computer models to simulate soil chemical reactions, and environmental applications. Offered every year on a regular basis.

CRSS 8010. Research Methods. 3 hours.

Scientific method, thesis and journal article preparation, manuscript review, seminar presentation, grant applications, and computer use related to these topics. Offered every year on a regular basis.

CRSS 8100. Advanced Crop and Soil Science Seminar. 1 hour. Repeatable for maximum 2 hours credit.

Instruction and practice in oral scientific presentations. A literature search within a general topic area unrelated to degree research, and a formal seminar on the subject, are required. Offered fall and spring semesters.

CRSS 8210. Special Problems in Crop and Soil Science. 1-3 hours. Repeatable for maximum 3 hours credit.

The planning, completion, and reporting of short-term projects in crop and soil sciences, other than thesis or dissertation, conducted in the laboratory, greenhouse, or field. Non-Traditional Format: This course will provide graduate students credit for conducting a research problem under the direction of a faculty member in Crop and Soil Sciences. Credit is variable dependent upon the scope of the research project. Offered fall, spring, and summer semesters.

CRSS 8220. Advanced Topics in Crop and Soil Sciences. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Advanced topics and methods in Crop and Soil Science, including tropical soil management, application of geographic information systems to crop production, DRIS analysis, advanced analytical methods, microclimatology, crop modeling, and other timely topics. Offered fall, spring, and summer semesters.

CRSS 8280-8280L. Crop Response to Microclimate. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BTNY 3830-3830L or permission of department.

Relationships between the microclimate and growth of crop plant communities. Physiological and morphological factors involving response of crops to microclimate are discussed along with application of the principles to crop production. Not offered on a regular basis.

CRSS 8330-8330L. Physiology of Herbicide Action. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: CRSS 4340/6340-4340L/6340L or permission of department.

Herbicide action in crops and weeds, including uptake through roots, penetration through leaves, and translocation in the plant; mechanism and mode of action of individual herbicides as well as metabolism of xenobiotics in the plant. Labora-

tory component consists of research techniques used in herbicide physiology research. Offered spring semester of even-numbered years.

CRSS 8340-8340L. Environmental Aspects of Herbicide Use. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: CRSS 4340/6340-4340L/6340L or permission of department.

Behavior of herbicides in soil, water, and air; transfer and transformation processes affecting herbicides. Laboratory introduces research techniques necessary to examine herbicide transfer and transformation. Offered spring semester of odd-numbered years.

CRSS 8350. Weed Ecology. 2 hours.

Prerequisite: CRSS 4340/6340-4340L/6340L or permission of department.

Weed succession and development in crops, weed-crop interference, and physiological aspects of weed-crop interactions with an emphasis on modeling. Offered fall semester.

CRSS 8520. Advanced Soil Fertility. 3 hours.

Prerequisite: (CRSS 4590/6590-4590L/6590L and CHEM 2300 and CHEM 2300L) or permission of department.

Physical, chemical, and biological properties of soil; plant mineral nutrient availability; theory and use of modern soil testing methods. Includes soil, environmental, and management factors that control crop use of applied chemical fertilizers and other sources of plant nutrients. Offered on a regular basis.

CRSS 8540-8540L. Soil Mineralogy. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: CRSS 4540/6540-4540L/6540L or CRSS 4670/6670 or GEOL 4300/6300 or permission of department.

Mineral structure, properties, weathering, formation, and identification as related to soil behavior, distribution, and genesis. Application of laboratory techniques for identification and quantification of minerals in soils and sediments. Offered every year on a regular basis.

CRSS 8600. Advanced Soil Physics: Numerical Method. 3 hours.

Prerequisite: [MATH 2210-2210L and CRSS 4600/6600-4600L/6600L] or permission of department.

Numerical approach to solving water and solute transport equations. Two-dimensional water and solute movement in unsaturated soils and shallow groundwater are examined by solving the governing partial differential equations using a finite difference numerical technique. Offered on a regular basis.

CRSS 8610. Advanced Soil Physics: Analytical Method. 3 hours.

Prerequisite: [MATH 2210-2210L and CRSS 4600/6600-4600L/6600L] or permission of department.

Analytical approach to solving solute transport equations using Laplace transforms. One dimensional deterministic and stochastic transport models for solute movement through unsaturated soil are expressed in terms of transfer functions and compared. Offered every year on a regular basis.

CRSS(ECOL) 8650. Nutrient Cycling Models. 3 hours.

Prerequisite: [CSCI 7010 and CRSS(MIBO) 4610/6610-4610L/6610L] or permission of department.

Structure, function, and performance of current nutrient cycling models used to simulate carbon, nitrogen, phosphorus, and sulfur transformations in the soil. Offered on a regular basis.

(CRSS)GEOL 8760. Organic Contaminant Hydrogeology. 3 hours.

Prerequisite: (CHEM 2100 and CHEM 2100L) or (CHEM 2212 and CHEM 2212L) or permission of department.

Physical and chemical processes controlling the mobility and fate of organic contaminants in soils, sediments, surface, and ground waters. Processes include biotic and abiotic (hydrolysis, volatilization, sorption, redox, and photochemical) reactions in the natural systems. Relationships between chemical structure and reactivity in the environment. Offered spring semester of even-numbered years.

CRSS 8880. Quantitative Aspects of Plant Breeding. 3 hours.

Prerequisite: [CRSS 4040/6040 and STAT 6220] or permission of department.

Quantitative and population plant genetics and their interrelationship with plant breeding. Genetic and environmental variation and how they relate to selection procedures and choice of type of variety. Offered every odd-numbered year on a regular basis.

CRSS 8890-8890L. Plant Cytogenetics. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BTNY 8100 or permission of department.

Classical and molecular cytogenetics are integrated to explain the reproductive behavior of angiosperms, the applications of cytogenetics to plant improvement, and the study of plant genetics. Offered every even-numbered year on a regular basis.

CRSS(BTNY) 8900. Advanced Plant Genetics. 3 hours.

Prerequisite: BTNY 8100 or CRSS 8890-8890L or permission of department.

Recent developments in plant genetics: sexual incompatibilities and somatic hybridization, genetic engineering; RFLPs and other molecular markers, linkage and mapping; cytoplasmic genetics; and classic papers. Offered every odd-numbered year on a regular basis.

CRSS 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CRSS 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Entomology

Ray Noblet, *Head*

Kenneth G. Ross, *Graduate Coordinator*,

542-7699

(*Biological Sciences Building*)

Requirements for the PhD include completion of research skills requirement in statistics, computer science, foreign language or comparable skill.

The Department of Entomology offers graduate work leading to the professional MPPPM (Master of Plant Protection and Pest Management) degree, and the MS and PhD degrees. The MPPPM is a non-thesis degree requiring specified graduate level course work, two semesters of internship, plus selected graduate level electives. The MS and PhD are research degrees requiring course work plus original research leading to a thesis or dissertation. Students holding the baccalaureate degree are normally admitted at the MS level but may petition to bypass this degree and work towards the PhD after meeting specific departmental requirements.

In addition to the faculty at the Athens campus, students may carry out research under the direction of faculty at the Experi-

ment Station at Griffin or at Tifton, Georgia. Facilities and opportunities for studies on applied aspects of entomological problems are emphasized at the stations. On the Athens campus, faculty joint staffed with the Departments of Genetics, Biochemistry and Molecular Biology, Biological Sciences Division, the Museum of Natural History, and the Institute of Ecology enable students to earn a degree in entomology with training in related disciplines.

Facilities outside the department include electron transmission and scanning microscopes, cell sorter, monoclonal and sequencing labs, computer facilities, nine agricultural research farms, forest research areas, the Museum of Natural History, and the U.S. Department of Agriculture and Forestry laboratories. Particularly good library facilities in entomology are available at the Athens campus.

Departmental teaching and research assistantships are available from the Entomology Department. Other financial aid is available through the Graduate School, but applications should be submitted to the Department of Entomology.

Students without previous courses in entomology, genetics, or biochemistry may be required to make up deficiencies.

ENTO 4000/6000-4000L/6000L. General Entomology. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1107-1107L and BIOL 1108-1108L.

Functional anatomy and physiology, behavior, ecology, insects as vectors of pathogens, chemical and biological control of pests. Laboratory sessions are devoted primarily to collecting and the identification of major families of insects. Offered fall semester.

ENTO 4010/6010-4010L/6010L. Insect Taxonomy. 3 hours. Three lectures and two 2-hour lab periods.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Insect identification, classification, and phylogeny; collection and preparation techniques for insect specimens; introduction to theoretical and practical aspects of systematics. Offered fall semester.

ENTO(CRSS) 4250/6250-4250L/6250L. Pesticide Management and Utilization. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L and [(CHEM 2100 and CHEM 2100L) or (CHEM 2211 and CHEM 2211L)].

Practical management and utilization of pesticides in urban and agricultural environments. Subject areas include classification of insecticides, herbicides, and fungicides, etc., their general chemical and toxicological properties, deployment philosophy, hazards and environmental impact, formulation and application, safety and disposal, and management of pesticide resistance. Offered spring semester.

ENTO 4400/6400-4400L/6400L. Insect Behavior. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L.

Principles of behavior; communication, sexual behavior, anti-predator adaptations, insect-plant interactions, and insect sociality. Offered spring semester of even-numbered years.

ENTO 4740/6740-4740L/6740L. Insect Pest Management. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: ENTO 3740-3740L or permission of department.

Major applied insect control techniques; the advantages and limitations of these tactics including practicality, economics, environmental impact, etc. Integrated control systems for development of a pest management program. Offered spring semester of even-numbered years.

ENTO 4820/6820-4820L/6820L. Entomology in Natural Resources Management. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or permission of department.

Arthropods important in management of forest resources including timber, wildlife, and recreation. Offered fall semester of odd-numbered years.

ENTO 5730/7730-5730L/7730L. Entomology for Teachers. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: Permission of department.

Insects and related forms, their identification, and life habits, with emphasis on their use in pre-college life science curricula. Offered summer semester.

ENTO 6130. Internship in Crop Protection and Pest Management. 1 hour.

Prerequisite: Permission of department.

Working experience with public or private agencies concerned with pest management.

Non-Traditional Format: Working experience of approximately one semester in length with public or private agencies concerned with pest management. Offered fall, spring, and summer semesters.

ENTO 6150. Insect Physiology. 3 hours.

Prerequisite: ENTO 4000/6000-4000L/6000L and [BCMB(BIOL)(CHEM) 3100 or CBIO(BIOL) 3400].

Organization and function of organ systems in insects, emphasizing evolutionary and molecular perspectives. Offered spring semester.

ENTO 6500-6500L. Insect Ecology. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L.

Special ecology of insects in natural and managed ecosystems. Offered spring semester.

ENTO 6600-6600L. Insect Morphology. 3 hours. Three lectures and two 2-hour lab periods.

Prerequisite: ENTO 4010/6010-4010L/6010L or permission of department.

Form and function of insect anatomy in phylogenetic context; techniques for dissection, preparation and illustration of insect morphology. Offered spring semester of odd-numbered years.

ENTO(MIBO) 6670-6670L. Insect Pathogens. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Insect pathology, including history, classification of diseases, insect response to pathogens, normal insect/microbe ecology, and the production and use of insect pathogens for pest control. Offered spring semester of odd-numbered years.

ENTO 6940-6940L. Aquatic Entomology. 3 hours. Three lectures and two 1-hour lab periods.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Ecology, life history, biology, and taxonomy of aquatic insects, their role in ecosystems and biological monitoring. Offered spring semester of even-numbered years.

ENTO 7000. Master's Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENTO 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ENTO 8000. Entomology Seminar. 1-2 hours. Repeatable for maximum 15 hours credit.

Entomology, both fundamental and applied, including literature reviews and discussion of recent events. Offered fall and spring semesters.

ENTO 8050. Principles of Systematics. 2 hours. One 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

History and philosophy of systematics, the science of biological classification, with special reference to insects. Methods of analysis and types of data in systematic biology. Offered fall semester of even-numbered years.

ENTO 8080. Topics in Insect Physiology and Biochemistry. 2 hours. Repeatable for maximum 6 hours credit. One 2-hour lab period.

Prerequisite: ENTO 6150 or permission of department.

Special topics in insect physiology and biochemistry. Offered fall semester of odd-numbered years.

ENTO 8100. Evolution of Insects. 2 hours. One 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Organic evolution, the history of evolutionary thought, methods for studying evolution, and contemporary topics in evolutionary theory with a special emphasis on insects. Offered fall semester of odd-numbered years.

ENTO 8310. The Insect/Plant Interactions. 2 hours.

Prerequisite: ENTO 6150 or permission of department.

Chemical and physical description of insect/plant interactions. Emphasis placed on the plant surface and its role in insect behavior. Not offered on a regular basis.

ENTO 8340. Social Insect Biology. 2 hours. One 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Social insects and their physiology, ecology, behavior, and evolution. Offered fall semester of odd-numbered years.

ENTO 8570. Molecular Entomology. 2 hours.

Prerequisite: ENTO 6150 or permission of department.

Contemporary issues in insect physiology, development, behavior, and control, with an emphasis on the latest molecular information. Offered spring semester of even-numbered years.

ENTO 8650. Vector Biology. 3 hours. Repeatable for maximum 6 hours credit.

Identification, ecology, physiology, and biochemistry of ticks and associated disease-causing parasites, vector-host and vector-parasite interactions. Current research topics. Offered spring semester.

ENTO 8710-8710L. Immature Insects. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Classification, identification, biology, and economic significance of insect larvae. Offered fall semester of even-numbered years.

ENTO 8820. Biological Control. 3 hours.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Biological control of arthropod pests and weeds; biology of parasitoids and predators; historical perspective, ecological basis and implementation in traditional and alternative agricultural systems; integration with other pest management tactics. Offered fall semester of even-numbered years.

ENTO 8900. Problems in Entomology. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Special problems and topics in entomology. Non-Traditional Format: Course requirements are individually negotiated between the student and instructor. Offered fall, spring, and summer semesters.

ENTO 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENTO 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Environmental Health Science

Phillip L. Williams, *Graduate Coordinator*
542-0606
(Environmental Health Building)

The Master of Science degree in Environmental Health is offered with the opportunity to specialize in environmental protection, industrial hygiene, or public health. Students within the program also can pursue an em-

phasis in toxicology (environmental or mammalian) through participation within the University's Interdisciplinary Toxicology Program (see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program"). The Environmental Health Science Program is flexible enough to interest students who may want to consider the MS degree as a terminal degree and also it is designed to accommodate those graduates who want to use the MS degree as a preparatory step toward the PhD degree.

Faculty within the Environmental Health Science Program have expertise in several fundamental and applied disciplines offering a diverse selection of courses and research programs ranging from environmental air and water quality to total human chemical exposure and risk assessments. Courses within the Environmental Health Science Program and appropriate courses in toxicology, environmental epidemiology, statistics, and biochemistry provide in-depth training and laboratory experience. Research facilities include laboratories equipped to handle a wide-range of chemical analyses, toxicological bioassays, air or water quality assessments, and microbiological environmental issues.

Prospective students who desire financial aid may apply for assistance directly to the Environmental Health Science Program. A limited number of research and teaching assistantships are available through individual faculty members. Other assistantships are available through the Graduate School and application for these should be made directly to the Graduate Coordinator.

EHSC 4080/6080. Environmental Air Quality. 2 hours.

Prerequisite: CHEM 2211 and CHEM 2211L. Sources and control of community air pollution; effects of air pollutants on human health and the environment; regulatory and public policy issues. Offered spring semester.

EHSC 4100/6100-4100L/6100L. Industrial Hygiene. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 2211 and CHEM 2211L. The anticipation, recognition, evaluation, and control of those environmental factors, arising in or from the workplace, which can cause sickness, impaired health and well-being, or significant discomfort and inefficiency among workers or among community citizens. Offered fall semester.

EHSC 4150/6150. Solid and Hazardous Waste Management. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and MATH 1113 and STAT 2000.

Regulatory, chemical, and engineering aspects of solid and hazardous waste management, including RCRA, CERCLA, landfill and incinerator design, pollutant transport and fate, and potential for human health impacts. Offered fall semester; offered spring semester of even-numbered years.

(EHSC)FDST(MIBO) 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems. Offered fall semester.

(EHSC)FDST(MIBO) 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations. Offered spring semester.

EHSC 4350/6350-4350L/6350L. Environmental Chemistry. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: EHSC 4150/6150.

Chemical principles of environmental processes which result from natural or human-generated phenomena; air, water, and soil chemical reactions involving pollutants and wastes; measurement of pollutants in the environment. Offered spring semester of odd-numbered years.

EHSC 4490/6490. Environmental Toxicology. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and (BIOL 1104-1104L or BIOL 1108-1108L).

Extent and significance of toxic agents in the environment, and the physical, chemical, and biological processes which determine their behavior, fate, and ultimate effect on human health. Offered fall and spring semesters.

EHSC 4590/6590-4590L/6590L. Water and Wastewater. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Chemistry and microbial life of water and wastewater, domestic and industrial, with scrutiny of current treatment processes. Sampling methods will be demonstrated. Effects of different types of waste on microbial population of rivers and streams. Offered spring semester.

EHSC 4610/6610. Water Pollution and Human Health. 3 hours.

Prerequisite: EHSC 3060.

Prerequisite or corequisite: CHEM 2211 and CHEM 2211L.

Human health issues related to water consumption and use, focusing on water contamination from municipal, industrial, and agricultural practices. Offered fall semester.

EHSC 6010. Proseminar in Environmental Health. 1 hour.

Prerequisite: Permission of department.

Research methods with an emphasis on presentation and instructional techniques. Offered spring semester.

EHSC 7000. Master's Research. 1-12 hours.

Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EHSC 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

EHSC 8100. Current Topics in Environmental Health Science. 2 hours.

Public health, industrial hygiene, environmental protection, hazardous waste management, and environmental/occupational toxicology. Offered fall semester.

EHSC(AAEC) 8120. Roles and Responsibilities of Environmental Policy Makers. 2 hours.

Prerequisite: Permission of department.

Roles of science, engineering, law, journalism, economics, grass roots activism, and the legislative and regulatory process in the development of environmental policy. Offered spring semester.

EHSC 8150. Environmental Health Seminar. 1 hour.

Prerequisite: Permission of department.

Selected topics in environmental health. Offered fall, spring, and summer semesters.

EHSC 8510-8510L. Environmental Risk Assessment and Communication. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: EHSC 4490/6490 or PHRM(VPHY) 6910 or PHRM(VPHY)(POUL)(EHSC) 8930 or permission of department.

Assessment of risks related to environmental exposures; government agency definition and conduct of risk assessments; public communication of environmental exposure risks. Offered fall semester.

EHSC(ECOL) 8610. Aquatic Toxicology. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and [EHSC 4490/6490 or PHRM(VPHY) 6910 or PHRM(VPHY)(POUL)(EHSC) 8920].

Toxicological effects of aquatic pollution focusing on fate and transport of xenobiotics; xenobiotic accumulation, dynamics, and toxicity in aquatic organisms; the analysis and modeling of the effects of aquatic pollution on organisms; and the determination of related risks to aquatic ecosystems and human populations. Offered fall semester.

(EHSC)ECOL 8630-8630L. Quantitative Ecological Toxicology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and (STAT 4220 or STAT 6220).

Principles and quantitative methods for the analysis of ecotoxicological data. Offered fall semester of even-numbered years.

(EHSC)PHRM(POUL)(VPHY) 8930. Chemical Toxicology. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Chemical contamination of air, water, and food by major agricultural and industrial chemicals. Emphasis will be placed on sources of contamination, fate of chemicals in the environment, target species, health effects, chemical analyses, and contamination control. Offered spring semester.

Food Science and Technology

Michael P. Doyle, *Head*

Philip E. Koehler, *Graduate Coordinator,*
542-1099

(Food Science Building)

Programs of study leading to both the Master of Science and Doctor of Philosophy degrees in food science are offered in the various fields of interest in the Division of Food Science and Technology.

Since the application of science and engineering is important in properly selecting, preparing, processing, packaging, distributing and utilizing foods, students selecting this field must be able to delve into problems involving chemistry, microbiology, engineering, and other sciences as well as in the more applied problems concerned with food production, stability, or toxicology. Individuals whose baccalaureate degree is in

other fields of science often enter this graduate program because of the important challenges of supplying food to mankind and the opportunities that this field provides to those with advanced degrees. Programs of study are designed for each individual to best utilize his/her prior training and his/her career objectives. The food science and technology division occupies the food science building in the University of Georgia Science Complex on South Campus in Athens and the food science building at the Georgia Agricultural Experiment Station in Griffin. All three buildings are well-equipped with modern instrumentation, pilot plants, and other facilities necessary for graduate research in food processing, food chemistry, food microbiology, food engineering, sensory evaluation, food biotechnology, food toxicology, product development, and nutrient analyses. Faculty in the division are scientists and engineers with expertise in several fundamental and applied disciplines offering a diverse selection of courses and research programs.

FDST 4010/6010. Principles of Food Processing. 3 hours.

Prerequisite: MIBO 3500 and CHEM 2100 and CHEM 2100L and (FDST 2010 or FDST 3000). Principles of food preservation by chilling, freezing, dehydration, fermentation, and thermal processing. Offered fall semester.

FDST 4020/6020. Processing Methods in Food Science. 2 hours. Two 3-hour lab periods.

Prerequisite: FDST 4010/6010. Processing methods to control microbial and enzymatic activity and to minimize chemical and physical deterioration of foods. Offered spring semester.

FDST(MIBO) 4030/6030-4030L/6030L. Food Microbiology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500. Interactions of microorganisms with food and the implications of these interactions for food preservation, safety, and fermentations. Pathogenic microorganisms associated with food. Analysis of foods for the presence of microorganisms. Offered fall semester.

FDST 4040/6040-4040L/6040L. Food Chemistry. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: BCMB(BIOL)(CHEM) 3100 and (FDST 3000 or FDST 4010/6010).

Chemical, physical, and functional properties of food constituents and ingredients. Offered fall semester.

FDST 4050/6050-4050L/6050L. Food Engineering Fundamentals. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PHYS 1111-1111L and MATH 2210-2210L.

Prerequisite or corequisite: FDST 4010/6010.

Mass and energy balance, fluid flow, heat transfer, and refrigeration in food plant operations. The theory, calculations and design practices, and equipment used in these operations, as well as the physical, chemical, and microbial changes that can occur in foods in processes employing these operations. Offered fall semester.

FDST 4060/6060-4060L/6060L. Food Engineering Fundamentals. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FDST 4050/6050-4050L/6050L or permission of department.

Phase equilibria in foods, psychrometrics, water activity, freezing, dehydration, evaporation, membrane separations, extrusion, and process control. Offered spring semester.

FDST 4070/6070. Nutritional Quality and the Effect of Technology. 3 hours.

Prerequisite: FDST 4040/6040-4040L/6040L or BCMB(BIOL)(CHEM) 3100.

The nutritional properties of food and the effects of modern technology on nutritional quality. Offered spring semester.

FDST 4080/6080-4080L/6080L. Instrumental Methods of Food Analysis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 2100 and CHEM 2100L.

Spectrophotometric, colorimetric, chromatographic, and potentiometric methods of analysis as applied to food. Emphasis will be placed upon correlation and interpretation of results. Offered spring semester.

FDST 4090/6090-4090L/6090L. Food Quality Control. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: [FDST 2010 or FDST 3000] and STAT 2000.

Designing and implementing food quality and process control programs. Monitoring and controlling process specifications and capabilities. Developing food attribute and variable control charts. Examining food sampling plans and verifying HACCP food safety plans. Offered spring semester.

FDST 4100/6100. Governmental Regulation of Food Safety and Quality. 2 hours.

Role of mandatory and optional food laws and regulations exercised by state, federal and international agencies on food quality, safety, whole-

someness, and nutrition. Offered spring semester.

FDST 4110/6110-4110L/6110L. Food Packaging. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: FDST 3000.

Raw materials, processes, and machinery used in the transportation, storage, and marketing of packaged food products. The relationship between packaging materials, food processing operations, and product quality. Evaluation of chemical and physical properties of food package materials. Offered fall semester.

FDST(MIBO) 4120/6120-4120L/6120L. Food Fermentations. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Microbial and technical aspects of dairy, vegetable, meat, grain, and fruit fermentations. Products studied include cheese, sausage, beer, wine, and soy sauce. Offered spring semester.

FDST 4130/6130. Food Biotechnology. 3 hours. Prerequisite: BCMB(BIOL)(CHEM) 3100 or permission of department.

Recombinant DNA in food and enzyme biotechnology, tissue culture, and microbial transformations. Applications and regulations of biotechnology in the fats and oils industry. Offered spring semester.

FDST(ADSC) 4140/6140-4140L/6140L. Advanced Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L and FDST 4040/6040-4040L/6040L.

Meat processing and technology, scientific basis for meat as a food, USDA and FDA regulations governing meat processing, and the latest innovations in commercial meat processing. Offered spring semester.

FDST 4250/6250-4250L/6250L. New Food Product Development. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (FDST 4010/6010 and FDST 4040/6040-4040L/6040L) or permission of department.

New food product development, food constituents and functionality, ingredient functions and selection, sensory evaluation/application, dietary guidelines and food regulations affecting product development, new product development project management, protecting innovations, market testing. Offered spring semester.

FDST(EHSC)(MIBO) 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental

microbiology; applications of microorganisms to solve environmental problems. Offered fall semester.

FDST(EHSC)(MIBO) 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations. Offered spring semester.

FDST 5010/7010-5010D/7010D. Food Formulation and Preservation. 3 hours. One lecture and one 4-hour lab period.

Not open to students with credit in FDST 4010/6010.

Food preservation by chilling, freezing, fermentation, canning, and dehydration. Formulation of food products and interactions of food ingredients. Applications of principles to experiments in food science. Offered spring semester of odd-numbered years.

(FDST)ADSC 6170-6170L. Experimental Techniques in Meat Science and Muscle Biology. 3 hours. Two 3-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or STAT 4220 or STAT 6220 or permission of department. Basic methods in laboratory techniques in meat science. Experiments will familiarize students from a wide variety of backgrounds with a number of laboratory techniques, including lipogenesis, muscle histology, enzyme kinetics, and muscle metabolism. Offered spring semester of odd-numbered years.

FDST 6500. Proseminar in Food Science. 1 hour. Seminar on research methods with an emphasis on presentation and instructional techniques; required of all new Food Science graduate students. Offered fall and spring semesters.

(FDST)ADSC 6890. Advanced Meat Science. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or permission of department.

The theories and methods used in meat science in determination of tissue growth; compositional techniques; muscle protein and lipid organization, structure, and function; biochemical conversion of muscle to meat, and its impact on meat quality and palatability in meat animals. Offered fall semester of even-numbered years.

FDST 7000. Master's Research. 1-10 hours. Repeatable for maximum 40 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

FDST 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

FDST 8010. Food Lipids. 3 hours.

Prerequisite: FDST 4040/6040-4040L/6040L or BCMB(BIOL)(CHEM) 3100 or permission of department.

Structure, composition, preservation, deterioration, analysis, nutritional qualities, functional properties, and biotechnological modification of lipids. Fat substitutes in foods. Offered fall semester of odd-numbered years.

FDST 8020-8020L. Flavor Chemistry and Evaluation. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (STAT 4210 or STAT 6210) and CHEM 2100 and CHEM 2100L.

Sensory methods of evaluating flavor and physical or chemical methods of measuring flavor components; the flavor characteristics of various chemicals, especially as influenced by concentration and interaction with other compounds; flavor formulation; and the stability of flavor substances during processing and storage. Offered spring semester of even-numbered years.

FDST 8030. Seafood Technology. 3 hours.

Prerequisite: (FDST 4010/6010 and FDST 4040/6040-4040L/6040L) or permission of department.

Fishery resources and availability as food, nutritive composition, postharvest biochemical and microbial changes, fishing and handling technology, chilling and freezing, dehydration/smoking/salting, fermentation, canning, minced fish technology, aquaculture, quality and safety evaluation, distribution and marketing. Offered summer semester of even-numbered years.

FDST 8040. Food Colorants. 3 hours.

The chemical, biochemical, and nutritive properties of natural and artificial food colorants. Methods used for their isolation and study are demonstrated. Offered fall semester of even-numbered years.

FDST 8050. Food Toxicology. 3 hours.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L.

Principles and problems in evaluating the wholesomeness and safety of foods, food components, and intentional or incidental additives. Consideration of selective toxicity, detoxication mechanisms, structure and biological activity; basic concepts and techniques of safety evaluation, in-

terpretation of biological data. Offered spring semester of even-numbered years.

FDST 8060-8060L. Advanced Food Processes.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST 4050-4050L.

The principles and basis for recently developed food processes. Analysis of equipment requirements and cost comparisons with conventional systems. Production of novel foods and ingredients using advanced technology. Plant simulation and optimization of processes. Offered spring semester of odd-numbered years.

FDST 8070. Food Proteins and Enzymes. 3 hours.

Prerequisite: FDST 4040/6040-4040L/6040L or BCMB 4010/6010.

Biochemistry of structure and function of proteins and enzymes important in food applications and as food ingredients. Offered fall semester of odd-numbered years.

FDST 8080-8080L. Food Texture. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST 4040/6040-4040L/6040L and FDST 4050/6050-4050L/6050L.

Food texture and rheology. Viscoelastic models of food systems. Instrumental and sensory methods of analysis. Factors affecting food texture. Texture of specific systems including liquids, gels, emulsions, and solids. Offered summer semester of odd-numbered years.

FDST 8090. Advanced Food Microbiology. 3 hours.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L.

Physiology and biochemistry of food-borne microorganisms; microbial control in food systems; advanced analytical techniques in food microbiology. Offered spring semester of odd-numbered years.

FDST 8100. Food Carbohydrates. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or permission of department.

The classes, structure, composition, properties, reactions, uses in food, biotechnological modification and analysis of carbohydrates. Offered fall semester of even-numbered years.

FDST 8110. Food Research and the Scientific Method. 2 hours.

Prerequisite: Permission of major.

Research as a process that transforms ideas into accessible knowledge. Unit operations include idea generation, problem definition, critical evaluation of literature, method selection, experimental design, data collection, processing and analysis, and knowledge dissemination. Additional aspects include philosophy, grantsmanship, planning, laboratory set-up and management, and career de-

velopment. Offered spring semester of odd-numbered years.

FDST 8120-8120L. Food Structure and Properties. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FDST 4040/6040-4040L/6040L and FDST 4050/6050-4050L/6050L.

Structural and microstructural aspects of foods. Methods for analyzing food structure. Food polymer and colloid systems. Aspects of structure which determine mechanical, thermal, and dielectric properties of foods. Offered summer semester of even-numbered years.

FDST 8500. Food Science Seminar. 1 hour. Repeatable for maximum 2 hours credit.

Discussion of selected topics in food science. Offered fall, spring, and summer semesters.

FDST 8800. Special Problems in Food Science. 1-3 hours. Repeatable for maximum 6 hours credit.

Selected problems associated with food science will be studied to develop greater facility in the application of scientific methods to the solution of problems. The student will work closely with an advisor to plan and complete a research project. Non-Traditional Format: Research in an area of interest under the direction of a faculty member. Offered fall, spring, and summer semesters.

FDST 8900. Topics in Food Science. 1-3 hours. Repeatable for maximum 6 hours credit.

Analysis of emerging issues and developing technologies in Food Science. Not offered on a regular basis.

FDST 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FDST 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Horticulture

Darrell Sparks, *Acting Head*

William M. Randle, *Graduate Coordinator*,
542-2471

(Plant Sciences Building)

The department offers graduate work leading to the Master of Science and the Doctor of Philosophy degrees in horticulture with majors in fruit crops, vegetable crops, ornamentals, and floriculture. Within a major, the main areas of specialization are plant breeding, biotechnology, anatomy, physiology, postharvest physiology, nutrition, biochemistry, weed control, water relations, and product utilization. The facilities available for graduate training include three research centers, three state experiment stations, and cooperative work is available with three federal research laboratories. These facilities are well equipped and represent the climatic areas of the state.

Graduate work in this department is designed to develop a high order of independent thought, broad knowledge, and technical skills. The emphasis in graduate work is placed on research, supplemented by courses and seminars.

The program for either graduate degree is planned on an individual basis by the student and their major professor. Admission status, credit requirements, transfer credits accepted, academic standards, residence requirements, and time limit conform to regulations as given by the Graduate School and the College of Agricultural and Environmental Sciences.

HORT 4010/6010-4010L/6010L. Olericulture.

4 hours. Three lectures and one 2-hour lab period. Prerequisite: HORT 3010.

Current cultural practice of and environmental influence on vegetable crop production. Offered spring semester of even-numbered years.

HORT 4020/6020-4020L/6020L. Pomology.

3 hours. Three lectures and one 2-hour lab period. Prerequisite: HORT 3020 or permission of department.

Culture and management of orchard crops, including site selection, cultivar and rootstock selection, pruning and training, propagation, integrated pest management, physiology of flowering and fruiting, harvest and postharvest proce-

dures. Laboratory provides hands-on experience pruning, training, and budding trees, and using/calibrating equipment needed for managing orchards. Offered spring semester of odd-numbered years.

HORT 4050/6050. Greenhouse Management. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: BIOL 1103-1103L or BTNY 1210-1210L.

Commercial greenhouse crop production practice with emphasis on plant nutrition, growth regulators, pest control, and postharvest handling. Offered spring semester.

HORT 4070/6070. Special Problems in Horticulture I. 1-5 hours.

Research on special problem under direction of faculty. Non-Traditional Format: As arranged under the direction of faculty. Offered fall, spring, and summer semesters.

HORT 4080/6080. Special Problems in Horticulture II. 1-5 hours.

Advanced research on problem of special interest under direction of faculty. Non-Traditional Format: As arranged under the direction of faculty. Offered fall, spring, and summer semesters.

HORT 4110/6110. Plant Nutrition. 3 hours.

Prerequisite: CRSS 3050-3050L.

Mineral nutrition of higher green plants. Offered fall semester.

HORT 4210/6210. Postharvest Physiology of Horticultural and Agronomic Crops. 4 hours.

Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1107-1107L or BTNY 1210-1210L or (CHEM 1212 and CHEM 1212L).

Catabolic and anabolic metabolism, and anatomical and pathological responses of harvested fruits, vegetables, nuts, seeds, cut flowers, and intact plants. Transportation, refrigeration, controlled atmospheric storage, drying, and packaging of harvested products. Offered spring semester.

HORT 4440/6440-4440L/6440L. Environmental Physiology in Horticulture. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in BTNY 4850/6850-4850L/6850L, BTNY 8890-8890L or CRSS 3300.

Prerequisite: (BIOL 1103-1103L and BIOL 1104-1104L) or (BIOL 1107-1107L and BIOL 1108-1108L) or (BTNY 1210-1210L and BTNY 1220-1220L).

Effects of environmental factors on growth and physiology of horticultural plants and modification of the plant's environment to improve crop production. Offered fall semester.

HORT 4890/6890. Biodiversity and the World's Food Crops. 3 hours.

Molecular, organismal, ecological, and sociocultural aspects of biodiversity. Independent research project required. Offered spring semester.

HORT 7000. Master's Research. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

HORT 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

HORT 8000. Horticultural Seminar. 1 hour. Repeatable for maximum 2 hours credit.

Papers on selected topics to be presented by advanced students, faculty members, and guest speakers. Offered fall, spring, and summer semesters.

HORT 8080. Horticulture Research. 1-10 hours.

This course is designed for graduate students who wish to carry out advanced research not covered in their thesis topic under the supervision of a faculty member. Non-Traditional Format: As arranged under the supervision of a faculty member. Offered fall, spring, and summer semesters.

HORT 8130. Advanced Plant Nutrition. 4 hours.

Three lectures and one 2-hour lab period.

Prerequisite: (HORT 4110/6110 and BTNY 3830-3830L) or permission of department.

The principles of plant nutrition, with emphasis on the theories of ion absorption, function of nutrient ions, and nutrient effects on plant composition. Offered spring semester of even-numbered years.

HORT 8150. Growth and Development of Horticultural Crops. 3 hours.

Prerequisite: BTNY 3830-3830L or permission of department.

Growth and development of economic plants. The physiological processes of growth, translocation, growth regulators, juvenility, maturity, senescence. Floral initiation and development of economic plants, with emphasis on the physiological processes of growth, translocation, growth regulators, juvenility, maturity, senescence, floral initiation and development, fruiting, tuber and bulb formation, vernalization, dormancy, rest, and seed germination. Offered fall semester of odd-numbered years.

HORT 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 35 hours credit. Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

HORT 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 15 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Plant Pathology

John L. Sherwood, *Head*
Charles W. Mims, *Graduate Coordinator*,
542-1291
(Plant Sciences Building)

Plant pathology offers three graduate programs: MS, PhD, and a professional Master of Plant Protection and Pest Management degree (MPPPM). The department has a strong tradition in scholarship and has an international reputation for research on diseases of apples, cotton, cowpeas, peaches, peanuts, pecans, small grains, soybeans, tobacco, and vegetables. Currently, active research and teaching programs are being conducted in all major areas of plant pathology involving many different crops.

The MS and PhD degrees are traditional academic degree programs which demand creative scholarship, technologic skill, and philosophic soundness. These programs emphasize the development of scientists who have the ability to fill positions of leadership in teaching, research, and administration. To achieve such goals of excellence, the student must be highly motivated and must make a commitment to the understanding of plant pathology so that biological principles can be developed and applied. Students may specialize in general plant pathology, mycology, bacteriology, nematology, virology, physiology, genetics, or epidemiology.

The MPPPM program is designed to pro-

duce graduates with comprehensive, multidisciplinary training in plant pathology, entomology, and agronomy.

Doctoral research skills requirement: one of the three following options, with a decision of which option to require being left to the discretion of the student's advisory committee, (1) statistics, (2) computer science, and (3) reading knowledge of a foreign language.

The Department of Plant Pathology has faculty located in Athens, Tifton and Griffin. All three locations are well equipped with modern instrumentation, greenhouses, and other facilities for graduate research. Land for field studies is located at main and branch experiment stations at several locations throughout Georgia in different climatic regions and major crop growing areas. A Plant Disease Clinic operated by the Extension Plant Pathology Department is used to give students practical training in disease diagnosis and control.

Prospective students who are interested in financial aid should file an application with the department; they will be considered for any Graduate School, College of Agricultural and Environmental Sciences, or department assistantship for which they are eligible.

PATH(BTNY) 4200/6200-4200L/6200L. Introductory Mycology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Morphology, biology, and taxonomy of fungi. Representatives of all major groups of fungi are considered. Offered fall semester.

PATH 4280/6280-4280L/6280L. Diagnosis and Management of Plant Diseases. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH 3530-3530L. Development of fundamental and practical knowledge for identification and management of plant diseases. Offered fall semester.

PATH 6130. Internship in Plant Protection and Pest Management. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department. Students will be involved and become familiar with the applied aspects of plant protection and pest management. Non-Traditional Format: The student will spend the semester in either a university or industry setting obtaining hands-on experience in the applied aspects of plant

pathology/pest management. Offered fall, spring, and summer semesters.

PATH 6250-6250L. Plant Nematology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: PATH 3530-3530L.

Morphology and biology of plant parasitic nematodes. An introduction to nematology, with an emphasis on nematode morphology, nematode disease of plants, and nematode management. Offered spring semester of odd-numbered years.

PATH 6290-6290L. Plant Pathogenic Bacteria. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH 3530-3530L or MIBO 3500.

Isolation, identification, inoculation, biology, and control of plant pathogenic bacteria. Offered fall semester of even-numbered years.

PATH 6350-6350L. Plant Virology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH 3530-3530L and BTNY (CRSS)(BIOL) 4500/6500.

Nature of plant viruses, replication and gene expression, movement and host range, purification, serology, control, and resistance. Offered spring semester of odd-numbered years.

PATH 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PATH 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PATH 8000. Field Plant Pathology. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: PATH 3530-3530L.

Four day long field trip to various parts of the state to see and collect examples of plant diseases in the field on economically important crops in Georgia. Non-Traditional Format: The student will spend four days in the field examining and collecting diseased plants in various parts of Georgia and surrounding states. Offered summer semester.

PATH 8150. Plant Pathology Graduate Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Presentation of thesis and dissertation results and discussion of papers and research topics in plant pathology. Offered fall and spring semesters.

PATH 8160. Special Topics in Plant Pathology. 1-3 hours. Repeatable for maximum 6 hours credit.

Advanced topics of current interest and importance in plant pathology. Offered fall and spring semesters.

PATH 8200. Applied Mycology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Fungi collected from various sources in nature will be brought into the laboratory for culture and/or preservation and subsequent identification using current taxonomic literature. Offered summer semester of odd-numbered years.

PATH(BTNY) 8210-8210L. Biology of Ascomycetes. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Comparative morphology of ascomycetes and their asexual stages; principles of taxonomy and training in identification. Offered fall semester of even-numbered years.

PATH 8310-8310L. Epidemiology of Plant Diseases. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH 3530-3530L.

Factors altering the course of disease epidemics in plant populations. Techniques for qualitative and quantitative measures of such factors will be emphasized. Offered spring semester of odd-numbered years.

(PATH)BTNY 8320-8320L. Zoosporic Fungi and Slime Molds. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Comparative biology of zoosporic fungi and slime molds as organisms. Topics include current research in morphology and development, phylogeny, physiology, ecology and the use of selected organisms as model systems. Laboratory will emphasize isolation and cultivation of these organisms and demonstration of their reproductive stages. Offered fall semester of odd-numbered years.

PATH 8400. Host-Pathogen Interactions. 3 hours.

Prerequisite: PATH 3530-3530L and PGEN 3580-3580L and (BCMB 4020/6020 or BTNY(CRSS)(BIOL) 4500/6500).

Principles of physiology and genetics of parasitism and disease resistance. Emphasis is placed upon how the genetic basis for host-pathogen compatibility and incompatibility is related to structural, physiological, and biochemical responses in diseased plants and to mechanisms

of resistance. Offered spring semester of even-numbered years.

PATH 8410. Advanced Plant Disease Management. 3 hours.

Prerequisite: PATH 3530-3530L.

Chemical controls and application methods, biological control and ecology of plant pathogens, host resistance, cultural practices, pesticide resistance, disease forecasting and other decision aids, integrated disease management, and economic aspects of disease management. Offered spring semester of even-numbered years.

PATH 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PATH 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Poultry Science

Henry L. Marks, *Head*

Birkett Howarth, *Graduate Coordinator*,
542-1369

(Livestock-Poultry Building)

The Department of Poultry Science offers excellent opportunities for graduate study for qualified students with degrees in biology, chemistry, economics and poultry science. Graduate programs leading to the MS and PhD degrees are offered in the fields of poultry products, nutrition, microbiology, molecular biology, mycotoxicology, genetics, physiology, management and parasitology. Facilities for graduate training include laboratories with the latest equipment for studies in lipid and mineral metabolism, environmental and reproductive physiology, physiological and population genetics and in avian diseases and parasites.

Equipment is available for electrophoretic and chromatographic separation, fractionation procedures, and use of radioactive iso-

topes, including a whole body counter. Specialized equipment includes liquid scintillation detectors, infrared, ultraviolet and dual spectrometers, ultracentrifuge, amino acid analyzer, gas-liquid chromatograph, and numerous other modern instruments.

Experimental poultry facilities are also available for studies, where large numbers of birds are required for research in the various areas of specialization in the graduate program, including a controlled temperature house for work in environmental physiology.

Superior students are encouraged to apply for graduate assistantships and fellowships which are available through the department.

The 8000 numbered courses in nutrition are listed in the offerings of animal nutrition.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

POUL 4050/6050. Advanced Poultry Breeding. 3 hours.

Prerequisite: POUL 3720.

The development of practical poultry breeding programs. The mode of inheritance and relative heritability of various characteristics of economic importance and criteria for effective selection toward their improvement. Offered spring semester of odd-numbered years.

POUL 4060/6060-4060L/6060L. Physiology of Avian Reproduction. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Lectures emphasize the reproductive physiology of poultry and integrate this information into management programs directed toward maximizing reproductive efficiency. Laboratories will emphasize the acquisition of skills and techniques in reproductive management, including the collection, preservation, and evaluation of semen, fertility evaluation, and proper incubation practices. Offered spring semester of even-numbered years.

POUL 4330/6330. Basic Mycotoxicology. 3 hours.

Prerequisite: BIOL 1108-1108L and CHEM 2100 and CHEM 2100L.

Various mycotoxins which occur in feedstuffs as they relate to agricultural production. Fungal producers, chemical and physical properties of the toxins, prevalence and distribution in nature, biological effects and mode(s) of action, and means of control. Offered spring semester.

(POUL)(ADSC)ANNU 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: [ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM) 3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine. Offered fall semester.

POUL 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

POUL 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

POUL 8010-8010L. Avian Physiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: Permission of department.

The physiology of all organ systems of birds other than the reproductive system. In-depth study of avian systems will be done using current scientific literature and review articles as source material. Offered fall semester of odd-numbered years.

POUL 8100. Poultry Science Seminar. 1 hour.

Repeatable for maximum 3 hours credit. One 1-hour lab period.

Prerequisite: Permission of department.

Reading, reports, and discussions of problems related to the field of poultry. Offered spring semester.

POUL 8120. Scientific Writing and Literature Retrieval. 3 hours.

Prerequisite: Permission of department.

Scientific writing and literature retrieval techniques in the life sciences. Library resources and their use through manual and automated retrieval systems and on practical aspects of oral and written communications of scientific information. Offered summer semester.

POUL 8150. Poultry Nutrition with Application to Avian Medicine. 1 hour.

Prerequisite: POUL 3750 or ADSC 3300-3300L.

The practical aspects of poultry nutrition and the relationship of nutritional programs in poultry production to disease problems. Offered fall semester.

POUL 8510. Problems in Poultry Science.

1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Selected problems in the specialized areas of poultry nutrition, genetics, physiology, poultry products technology, pathology, parasitology, and management. Non-Traditional Format: Course format established by major advisor. Not offered on a regular basis.

(POUL)CBIO(PARA) 8560. Seminar in Parasitology. 1 hour. Repeatable for maximum 3 hours credit. One 1-hour lab period.

Weekly discussion of parasitological topics. Not offered on a regular basis.

(POUL)PHRM(VPHY) 8920. Organ Systems Toxicology II. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the liver, carcinogenesis/mutagenesis, immune system, reproductive system, skin, and eyes. Offered spring semester of odd-numbered years.

(POUL)(EHSC)PHRM(VPHY) 8930. Chemical Toxicology. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Chemical contamination of air, water, and food by major agricultural and industrial chemicals. Emphasis will be placed on sources of contamination, fate of chemicals in the environment, target species, health effects, chemical analyses, and contamination control. Offered spring semester.

POUL 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

POUL 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

The Franklin College of Arts and Sciences

Wyatt, W. Anderson, Dean
(New College)

The Franklin College of Arts and Sciences, the oldest of the schools and colleges which make up the University of Georgia, offers masters and doctoral degrees in more than forty disciplines or areas of study within the humanities, fine arts, social sciences, and natural sciences. The degree offerings include Master of Arts, Master of Science, Master of Applied Mathematical Science, Master of Arts for Teachers, Master of Fine Arts, Master of Music, Master of Public Administration, Doctor of Musical Arts, Doctor of Public Administration, and Doctor of Philosophy. Additionally, graduate certificates are available in conservation ecology and sustainable development, environmental ethics, global policy studies, and women's studies.

Applications must be submitted to the Office of Graduate Admissions for these programs, but students should also seek information regarding entrance requirements, faculty research specialties within departments or programs, and graduate assistantships from the graduate coordinator(s) of any program(s) in which they have interest. The names of the department heads and graduate coordinators, course offerings, and additional information are also found in this bulletin.

African American Studies

R. Baxter Miller, *Director*
Institute for African American Studies,
542-5197
(Psychology Building)

The Institute currently arranges for collaborative graduate work with the departments of adult education, comparative literature, drama, English, history, political science, psychology, Romance languages, and sociology. Please consult any joint listings in the areas. Flexibly coherent programs should demonstrate disciplinary rigor along with brave new inquiries into fresh methods of scholarly integration. The Institute works especially to facilitate and authorize interdisciplinary options for diverse African Americanists of all kinds.

(AFAM)RELI 4201/6201. African American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The religious traditions of African Americans from Colonial times to the present; major religious movements, personalities, and ideas and their relationship to various aspects of American culture.

Offered every odd-numbered year on a regular basis.

(AFAM)RELI 4202/6202. Southern Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The origins, growth, and current practices of religion in the American South. The interaction between religion and other aspects of Southern culture, such as racial and gender concerns, education, Darwinian science, temperance, and politics. Offered every even-numbered year on a regular basis.

(AFAM)RELI 4203/6203. The Bible in the Black Church. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Biblical interpretation in black America from 1865 to the present. Offered every even-numbered year on a regular basis.

AFAM(DRAM) 4490/6490. African American Women in Cinema: Image and Aesthetics. 3 hours.

Prerequisite: Permission of department.

Selected films by and about African and African American women. A historical/critical overview of the presentation of these women in cinema with emphasis on contemporary African and African American women film makers. Not offered on a regular basis.

AFAM(PSYC) 4500/6500. Psychology of Prejudice. 3 hours.

Prerequisite: (PSYC 1101 or SOCI 1101) and senior standing.

Motivational, cognitive, social, and cultural factors that lead to discrimination in our society and various perspectives found in the research on discrimination. Not offered on a regular basis.

AFAM(PSYC) 4550/6550. Classic Studies in Black Psychology. 3 hours.

Prerequisite: AFAM(PSYC) 3150 or permission of department.

Studies which have had major social or scientific impact on the lives of Black Americans and the way black people have been viewed within psychology. Approach is historical and interdisciplinary. Not offered on a regular basis.

(AFAM)ENGL(LING) 6040. Language Use in the African American Community. 3 hours.

Prerequisite: Permission of department.

History and structure of the speech and language styles used in the African American community; examination of linguistic and cultural issues that confront the majority of African Americans; the role of the vernacular language of African Americans in society. Not offered on a regular basis.

(AFAM)SOCI 6370. Sociology of Race and Ethnicity. 3 hours.

The relationships of racial and ethnic groups with each other and with social institutions and processes. Offered every year on a regular basis.

(AFAM)ENGL 6770. Topics in African American Literature. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected topics in African American literature, such as autobiography, the Harlem Renaissance, Gwendolyn Brooks and Richard Wright, Black American literature and aesthetics. Offered spring semester of odd-numbered years.

(AFAM)ENGL 8720. Seminar in African American Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A detailed examination of selected forms and ideas in the African American tradition. Offered spring semester of even-numbered years.

AFAM 8960. Directed Reading in African American Studies. 3-9 hours. Repeatable for maximum 9 hours credit.

Independent directed reading course for graduate students whose programs of study require courses not available in the regular schedule. It makes the interdisciplinary study of African American culture and theory accessible to students who in traditional departments need to ground their inquiry in a broader context.

Non-Traditional Format: The course will usually require a 20-25 page paper of publishable quality. The reading list will be approximately eight full-length books and 6-25 journal articles and chapters. Not offered on a regular basis.

Anthropology

Stephen A. Kowalewski, *Head*

David J. Hally, *Graduate Coordinator,*

542-3962

(Baldwin Hall)

The Department of Anthropology offers programs leading to the degrees of Master of Arts and Doctor of Philosophy in anthropology. These graduate programs reflect training in basic anthropological knowledge and the department's focus on environmental and ecological anthropology.

Admission is only to the PhD program. Students may complete the requirements for an MA degree en route to the PhD or as the terminal degree in the program. Students are admitted and begin the PhD program only during Fall quarter. No new admissions are permitted in the Winter or Spring quarter.

Training focuses on the role of anthropology as a discipline in understanding the human-environment interface, both past and present, and from a cross-cultural perspective. The doctoral program also provides students with the flexibility to attain interdisciplinary training in other academic areas relevant to understanding issues of sustainable human ecosystems. Relevant academic areas for coursework within the university may include those offered in conjunction with the Institute of Ecology, the Environmental Ethics Program, the College of Agricultural and Environmental Sciences, the School of Forest Resources, and allied disciplines in the College of Arts and Sciences. Graduates of the program should be qualified for teaching, research, or applied employment opportunities. Requirements for the PhD degree include satisfactory performance on written and oral comprehensive examinations, fulfillment of a research skills requirement, and an approved dissertation which reflects the student's specialization and the departmental focus.

Prospective students must complete the application process by January 1.

(Please contact the graduate coordinator for current course offerings.)

ANTH 4000/6000. Anthropology of Economic Systems. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Models and methods used by anthropologists to study production, distribution, and consumption of goods in subsistence and market economies. Topics from the ethnographic literature include feasting, money, managing commons, pre-capitalist markets, and capitalist penetration of subsistence economies. Not offered on a regular basis.

ANTH 4020/6020. Indians of North America. 3 hours.

Prerequisite: ANTH 1102 or permission of major. North American Indian cultures at the time of European contact. Additional topics include origin and development of Indian culture, impact of European contact on native cultures, and problems faced by Native Americans today. Not offered on a regular basis.

ANTH 4040/6040. Visual Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Anthropological uses of film, video, and photographs in field research and in the presentation of research results, especially in relation to portrayal of indigenous people. Not offered on a regular basis.

ANTH 4050/6050. Cultural Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major. The analysis and cross-cultural comparison of human institutions. Not offered on a regular basis.

ANTH(LING) 4090/6090. Cognitive Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Folk systems of knowledge, with an emphasis on how people in different societies culturally identify, define, label, and classify phenomena such as color terms, plants, animals, and other environmental resources. Not offered on a regular basis.

ANTH 4200/6200. Field Methods in Archaeology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major. Corequisite: ANTH 4240/6240. Archaeological reconnaissance, survey, excavation, laboratory preparation and analysis of collected materials.

Non-Traditional Format: This course is taught in the field at an archaeological site, followed by laboratory preparation and analysis of collected materials. Contact hours exceed the average of three hours per week. Not offered on a regular basis.

ANTH(ECOL) 4210/6210. Zooarchaeology. 3 hours.

Prerequisite: ANTH 1102 or BIOL 1104-1104L or BIOL 1108-1108L or permission of major.

Animal remains recovered from archaeological sites, studied in light of zoological and archaeological methods and theories and interpreted in terms of human and animal behavior. Not offered on a regular basis.

ANTH 4240/6240. Laboratory Methods in Archaeology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major. Corequisite: ANTH 4200/6200. Environmental, chronological, preservational, and analytical methods and techniques of archaeological research. Non-Traditional Format: This course is taught in the field at an archaeological site. Many more contact hours are involved beyond an average of three per week. Not offered on a regular basis.

ANTH(ECOL) 4290/6290. Environmental Archaeology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of major. Prehistoric and historic human subsistence patterns through the methods and techniques of zooarchaeology, paleobotany, and paleonutrition. Theories of environmental reconstruction. Not offered on a regular basis.

ANTH(BTNY) 4300/6300-4300L/6300L. Ethnobotany. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major. Ethnobotanical research, with focus on knowledge and utilization of the plant world in traditional societies. Comparisons of societies in tropical forest ecosystems and evaluation of issues relating to intellectual property rights and traditional peoples' knowledge of plant species with potential economic value. Not offered on a regular basis.

ANTH 4310/6310. Archaeology of Eastern North America. 3 hours.

Prerequisite: ANTH 3220 or permission of major. Prehistoric and early historic aboriginal cultural variation in Eastern North America. Not offered on a regular basis.

(ANTH)GEOL 4340/6340. Archaeometry. 3 hours.

Prerequisite: GEOL(ANTH) 4700/6700. Methods of archaeometric analysis including chronometric and instrumental techniques. Absolute age dating and characterization of archaeological materials by physico-chemical analysis. Offered spring semester of even-numbered years.

ANTH 4540/6540-4540L/6540L. Environment and Health. 3 hours. Two lectures and one 2-hour lab period.

Bio-cultural medical anthropology focusing on the interaction among environment, biology, culture,

and society as determinants of health and health problems. Not offered on a regular basis.

ANTH 4550/6550. Ethnohistory. 3 hours.

Prerequisite: ANTH 1102 or permission of major. The methods used by anthropologists to reconstruct the history of preliterate societies from archaeological evidence, documentary evidence, and oral traditions. The ethnohistory of south-eastern United States. Not offered on a regular basis.

ANTH 4560/6560. Anthropology of Development. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Relationships among development, culture and environment from the world system perspective. Concepts of dependence, hegemony, inequality, and resistance are brought to bear in exploring interlinkages between (and among) underdevelopment, resource exploitation, and local autonomy and self-reliance. Not offered on a regular basis.

ANTH 4570/6570. Maritime Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Coastal and marine regions of the world in terms of human occupation, resource utilization, social organization, and human-environmental relationships. Identification of issues in traditional and contemporary management of coastal and marine ecosystems. Not offered on a regular basis.

ANTH 4580/6580-4580L/6580L. Ecology of Food, Diet, and Nutrition. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major. The impact of cultural behavior on the acquisition, preparation, and consumption of potentially edible natural resources. Not offered on a regular basis.

ANTH 4590/6590. Ecology and Evolution of Human Disease. 3 hours.

Prerequisite: Undergraduate level only: (ANTH 1102 and BIOL 1104-1104L) or permission of major; Graduate level only: ECOL(BIOL) 3500-3500L or permission of major.

Ecological, evolutionary, and biocultural aspects of human disease. Subjects include the ecology of infectious/parasitic disease pathogens and their human hosts, the evolution of human host-pathogen interactions, the impact of cultural and demographic change in human populations, and the effects of global environmental change on human disease patterns. Not offered on a regular basis.

ANTH 4630/6630. Field Methods in Cultural Anthropology. 6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ANTH 1102 and permission of major.

Supervised research projects in a field setting. Individual projects related to a central problem or issue, using research methods and techniques in cultural anthropology; interviews, surveys, participant-observation, and questionnaires are included. Non-Traditional Format: Since research projects are supervised in a field setting, the amount of contact hours varies. Contact hours exceed the minimum. Not offered on a regular basis.

(ANTH)RELI 4640/6640. Anthropology of Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Anthropological approaches to the world's major religions as they relate to complex societies. Not offered on a regular basis.

(ANTH)GEOL 4700/6700. Archaeological Geology. 3 hours.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L.

Archaeological geology examines the use of earth science methods and theories in the study of archaeological sites and their contents. The four major areas covered include: (1) the archaeological site and geology; (2) age determination techniques; (3) exploration techniques; (4) artifact characterization. Offered spring semester.

ANTH 4710/6710-4710L/6710L. Human Origins. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 and permission of major.

The evolutionary history of the human species through examination of the fossil record. The fossil record is introduced using precision casts of fossil specimens. Scientific methods are developed by rediscovering major findings. The influence of changing interpretations on the culture of science is demonstrated. Not offered on a regular basis.

ANTH 4790/6790. Human Adaptation. 3 hours.

Prerequisite: Undergraduate level only: ANTH 1102 and permission of major; Graduate level only: Permission of major.

Human diversity as response to environmental stress, from both a biological and cultural perspective. Topics include adaptation to heat, cold, altitude, malnutrition, and infectious disease; the impact of westernization and technological advancement on human biological function; and growth and development of the individual under environmental stress. Not offered on a regular basis.

(ANTH)LING 4860/6860. Sociolinguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The study of language as a cultural and social phenomenon. Topics include language and

meaning, language and world view, language and social behavior, and language and social issues. Offered every even-numbered year on a regular basis.

ANTH 4900/6900. Special Topics in Anthropology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ANTH 1102 or permission of major. Current topics in anthropology. Course may be taken through UGA Studies Abroad program. Not offered on a regular basis.

(ANTH)ECOL(FORS) 6140. Principles of Conservation Ecology and Sustainable Development II. 3 hours.

Prerequisite: ECOL 6080.

Social science dimensions of conservation and sustainable development; social, economic, and political considerations in managing natural resources; policy-level aspects to project implementation. Offered spring semester.

(ANTH)SOCI 6450. Sociopolitical Ecology. 3 hours.

The relationship between humans and the environment; ecological and social theories about environmental policies and problems. Offered fall semester.

ANTH 6490. Foundations of Ecological Anthropology. 3 hours.

Prerequisite: Permission of major.

Human-environment interaction in anthropological perspective from the eighteenth century to the present. Offered on a regular basis.

ANTH 6520. History of Anthropological Theory. 3 hours.

Prerequisite: Permission of major.

The development of anthropological theory. Offered on a regular basis.

ANTH 6600. Microcomputers for Anthropological Research. 1 hour.

Prerequisite: Permission of major.

Microcomputer hardware and software packages for anthropological research. These include word processing, data management programs, and packages designed specifically for anthropology. Not offered on a regular basis.

ANTH 6610. Introduction to Research Methods. 3 hours.

Prerequisite: Permission of major.

Central issues, underlying assumptions, and basic premises of anthropology. Course provides the requisite skills and knowledge for designing an original research project in anthropology. Not offered on a regular basis.

ANTH 6620. Methods in Sociocultural Anthropology. 3 hours.

Prerequisite: Permission of major.

Research methods and techniques used in sociocultural anthropology, with emphasis on ethno-

graphic field research, including observation, participant observation, interviewing, questionnaires, testing, and mapping. Methods of data organization, storage, retrieval, and preliminary analyses. Not offered on a regular basis.

ANTH 6920. Advanced Archaeology. 3 hours.

Prerequisite: Permission of major.

Fundamental issues in modern archaeology. Not offered on a regular basis.

ANTH 6950. Advanced Cultural Anthropology. 3 hours.

Prerequisite: Permission of major.

Cultural and social anthropology. Not offered on a regular basis.

ANTH 6980. Advanced Biological Anthropology. 3 hours.

Prerequisite: Permission of major.

Current trends in bioanthropology. Not offered on a regular basis.

ANTH 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

(ANTH)EFND 7150. Anthropology of Education. 3 hours.

Cultural aspects of educational processes, institutions, and issues in societies around the world organized around comparative analysis. Topics include education as cultural process and social function, as sociocultural structure, as cultural transaction, and as cultural product. Offered on a regular basis.

ANTH 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ANTH 8000. Special Topics in Anthropology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Intensive study on an individual basis in the field of the graduate student's major interest. Non-Traditional Format: Faculty and student will meet regularly to develop and discuss topic. Offered fall, spring, and summer semesters.

ANTH 8040. Seminar in Anthropology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Selected topics in Anthropology. Non-Traditional Format: Number of contact hours depends upon

number of credit hours. Not offered on a regular basis.

ANTH 8060. Primate and Human Ecology. 3 hours.

Prerequisite: Permission of major.

Interrelationships among biology, social organization, cultural diversity, and the physical environment. Emphasis is placed on the ecology of human and primate societies that affect and constrain biocultural adaptation. Not offered on a regular basis.

(ANTH)ECOL 8110. Tropical Ecological and Cultural Systems. 2 hours.

Prerequisite: ECOL(FORS)(ANTH) 6140.

Characteristics of tropical ecosystems, tropical biological communities, and human cultures in the tropics; how they differ from those in the temperate zone, and the implications for conservation and development. Offered spring semester of even-numbered years.

ANTH 8200. Seminar in Archaeology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Areas of special interest in the field of archaeology. Topics to be selected according to need. Not offered on a regular basis.

ANTH 8400. Human Population Ecology. 3 hours.

Prerequisite: ANTH 6490 or permission of major.

Theoretical population ecology applied to human populations, biocultural aspects, and multiplicity of causality in discussion/assessment of topics such as human demography and population regulation; disease ecology and epidemiology in human populations; interrelationships of human nutrition, social inequity, resource exploitation, and population mobility/migration/spatial organization. Offered spring semester.

ANTH 8410. Comparative Human Ecological Systems. 3 hours.

Prerequisite: ANTH 6490 or permission of major.

Concepts relevant to an ecological analysis of the formation, maintenance, and change of human social groups, considering in turn cultural, biocultural, structural and neo-Marxist perspectives. Offered on a regular basis.

ANTH 8420. Human Ecosystem Evolution. 3 hours.

Prerequisite: ANTH 6490 or permission of major.

Evolutionary perspectives on the biocultural mediation of human-environment relations from the Plio-Pleistocene through the Holocene, analyzed in terms of human ecosystem structures and functions, including cybernetics and flows of energy/matter and information; persistence and change as evolutionary and ecological concepts. Offered fall semester.

ANTH 8500. Seminar in Ecological Anthropology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ANTH 6490 or permission of major.

Topics in human environmental and ecological systems, including factors that contribute to emergence and maintenance of those systems. Not offered on a regular basis.

ANTH 8570. Economic Development and Health. 3 hours.

Prerequisite: Permission of major.

Interrelationship of development and medical pluralism on international health from the colonial era to the present. Not offered on a regular basis.

ANTH 8590. Ecology of Health Research. 3 hours.

Prerequisite: Permission of major.

Anthropological contributions to understanding health and disease within a human ecological framework. Not offered on a regular basis.

ANTH 8610. Field Methods in Ecological Anthropology. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of major.

Methods of anthropological research in field settings on environmental and ecological questions and problems, including ethnography, surveys, and formal measurement of resources. Non-Traditional Format: Since research projects are supervised in a field setting, the amount of contact hours varies. Contact hours exceed the minimum. Not offered on a regular basis.

ANTH 8620. Anthropological Data Analysis. 3 hours.

Prerequisite: ANTH 6610.

Procedures and techniques of analysis on anthropological data, including microcomputer software data analysis packages, with focus on issues in qualitative research, including text analysis, pattern recognition, matrix displays, and data graphics, and on issues in quantitative research, including hypothesis and model testing. Not offered on a regular basis.

ANTH(LING) 8880. Field Methods in Linguistics. 3 hours.

Prerequisite: Permission of major.

The techniques of recording and analyzing a foreign language by working directly with a native speaker. Not offered on a regular basis.

ANTH 9000. Doctoral Research. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ANTH 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Art

Carmon Colangelo, *Director*
Joe E. Sanders, *Graduate Coordinator*,
542-1624
(Visual Arts Building)

The Lamar Dodd School of Art offers programs for the Doctor of Philosophy in art, Master of Fine Arts, and Master of Art in art history, all organized to develop the student's creative independence and professional capability as a producing artist, designer, and scholar in a total environment of living art. In conjunction with the College of Education, the School of Art offers programs in art education leading to the Master of Art Education, Specialist in Education, and Doctor of Education degrees. The school's philosophy particularly stresses that the above goals be met for the art educator who must attain professional standards in the graduate studio as well as in the classroom.

Candidates for the PhD in art are required to demonstrate competence in either history of art or art education. When appropriate, a candidate's program of study may include courses in the theory and criticism of art and relevant areas of study outside the School of Art. The research skills requirement, in the history of art emphasis, is a reading knowledge of two foreign languages. In the art education emphasis, the research skills requirement may be met by either statistics or a foreign language. Satisfactory completion of written and oral preliminary examinations, a dissertation demonstrating original research, and a final oral defense before an examining committee of the faculty are also required.

Students in the MA program in art history must demonstrate a reading knowledge of a foreign language, pass a written general ex-

amination in art history, submit a thesis, and pass a final oral examination.

Applicants are admitted to all semesters. However, priority will be given to those applications completed no later than January 1st for the following three semesters. Applications for assistantships should be made to the graduate coordinator of the School of Art by January 1st for the fall semester. Information on additional fellowships may be obtained from the Office of Student Financial Aid.

The Georgia Museum of Art is a significant resource for the School of Art. It has a major collection of American paintings and over 5000 works on paper from all periods. The museum sponsors a full schedule of in-house and traveling exhibitions each year.

The following review and evaluation procedures apply to all students enrolled in a program leading to the MFA degree in studio art:

Upon completion of 18 semester hours of resident graduate work, the student must pass an oral examination which, with supporting creative studio work, will constitute an evaluation of his/her capability for continued enrollment in the MFA degree program. The evaluation will be conducted by a duly appointed faculty committee, which will determine if the student will be (1) continued in the regular MFA program, or (2) required to complete additional work beyond the regular MFA requirements, for the specific purpose of improving his/her skills, or (3) counseled to withdraw from the MFA program and consider alternative educational goals.

Students who successfully meet the requirements for continued enrollment in the MFA degree program, will be required to arrange a public exhibition of creative studio work during the final semester of residence. The exhibition will be evaluated by faculty, who will determine if the exhibited work represents a satisfactory level of professional accomplishment by the candidate. Faculty approval of the exhibition is a requirement for graduation.

Although some courses listed below have specific prerequisites, instructors for graduate courses may waive some prerequisites if the student can demonstrate adequate

training or experience. Likewise, the instructor may advise a student to withdraw from the class due to inadequate preparation or motivation.

Art

ARTS 4920/6920. Seminar in Contemporary Art. 3 hours.

Contemporary art from the point of view of studio artists. Offered fall and spring semesters.

ARTS 7990. Teaching Practicum. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Pedagogical readings related to art. Offered fall, spring, and summer semesters.

ARTS 8100. Graduate Seminar in Art. 3 hours. One 3-hour lab period.

Consideration of current issues in art practice and theory. Not offered on a regular basis.

ARTS 8350. Aesthetics and Art Criticism. 3 hours. One 3-hour lab period.

Prerequisite: Permission of department.

The theory and practice of analyzing, interpreting, and appraising. Not offered on a regular basis.

ARTS 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ARTS 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Art History

ARHI 4000/6000. Early Greek Art. 3 hours.

Prerequisite: Permission of department.

Vase painting, sculpture, and architecture from the Geometric through the Archaic periods. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4010/6010. Classical and Hellenistic Greek Art. 3 hours.

Prerequisite: Permission of department.

Sculpture, architecture, and some vase painting from the Classical and Hellenistic periods emphasizing major monuments, including the Temple of Zeus at Olympia, the Parthenon, and the Great Altar of Zeus and Athena at Pergamon. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4020/6020. Roman Art and Architecture. 3 hours.

Prerequisite: Permission of department.

Buildings and wall painting of Pompeii, Roman Republican portraiture, Imperial portraiture, and major buildings and their associated architectural sculpture located in Rome and other sites within the Empire. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4030/6030. Classical Tradition in the Visual Arts. 3 hours.

Prerequisite: Permission of department.

The influence of classical antiquity on the art and architecture of post-classical eras tracing formal affinities and the myths of classical gods and heroes. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4100/6100. Early Medieval Art. 3 hours.

Prerequisite: Permission of department.

Architecture, sculpture, and painting in Western Europe from the seventh through the eleventh centuries. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4110/6110. Romanesque Art. 3 hours.

Prerequisite: Permission of department.

Architecture, sculpture, and painting in Western Europe of the eleventh and twelfth centuries with particular emphasis on France. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4120/6120. Gothic Art. 3 hours.

Prerequisite: Permission of department.

Architecture, sculpture, and painting of the twelfth and thirteenth centuries in Europe with special emphasis on France. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4130/6130. Late Gothic Art in Italy. 3 hours.

Prerequisite: Permission of department.

Principal monuments and artists of the thirteenth and fourteenth centuries in Italy emphasizing figures such as Giotto, Duccio, Simone Martini, and Ambrogio Lorenzetti. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4200/6200. Early Renaissance in Italy. 3 hours.

Prerequisite: Permission of department.

Architecture, sculpture, and painting of the fifteenth century focusing on Tuscany, and the emergence and development of the new art principles in Florence represented in the work of such artists as Masaccio, Brunelleschi, Donatello, Alberti, Fra Angelico, Filippo Lippi, Ghirlandaio, Pollaiuolo, and Botticelli. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4210/6210. High Renaissance and Mannerism in Italy. 3 hours.

Prerequisite: Permission of department.

The climactic period of the Renaissance in Italy with special emphasis on such key figures as Leonardo, Michelangelo, Raphael, Protormo, Rosso Fiorentino, and Bronzino. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4220/6220. Northern Renaissance. 3 hours.

Prerequisite: Permission of department.

Painting north of the Alps, primarily in Flanders and Germany from the fourteenth to the sixteenth century, with special attention to the van Eycks, van der Weyden, Bosch, Durer, and Grunewald. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4290/6290. Renaissance and Baroque Sculpture. 3 hours.

Prerequisite: Permission of department.

The development of period styles and an analysis of the role of function and tradition in European sculpture for ca. 1260-1700, with special attention to the work of Donatello, Michelangelo, and Bernini. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4300/6300. Italian Baroque Art and Architecture. 3 hours.

Prerequisite: Permission of department.

Baroque art and architecture in Italy, with special emphasis on Rome, and such important figures as the Carracci, Caravaggio, Bernini, and Borromini. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4310/6310. Northern Baroque Art. 3 hours.

Prerequisite: Permission of department.

French and Dutch art of the seventeenth century with emphasis on such key figures as Rubens, Velasquez, Rembrandt, and Poussin. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4350/6350. Art and Architecture of the City of Rome. 3 hours.

Prerequisite: Permission of department.

The continuity of an artistic tradition in relation to the history of the seat of the Roman Empire, the Catholic Church, and modern Italy. Attention is given to specific sites, artistic types, and public processions. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4400/6400. Romanticism and Neoclassicism. 3 hours.

Prerequisite: Permission of department.

European art and architecture from ca. 1760 through 1865 including the sublime, the beautiful, the picturesque, historical revivalism, exoticism, rationalism, and eclecticism. Offered on a regular basis.

ARHI 4410/6410. American Art from Colonial Settlement through the Civil War. 3 hours.

Prerequisite: Permission of department.

The formation of a national identity and assimilation of European styles in painting, sculpture, and cultural artifacts such as photographs and popular illustrations. Artists include, Copley, Peale, Allston, Cole, Church, Quidor, Mount, Bingham, Heade, Bierstadt, and Homer. Offered on a regular basis.

ARHI 4420/6420. American Art of the Fin de Sie'cle 1876-1913. 3 hours.

Prerequisite: Permission of department.

The transition in American art from Victorianism to early Modernism in an age of science, progress and decay, tradition and ethnicity, motherhood and the "new woman." A key cultural referent will be the World's Columbian Exposition of 1893. Offered on a regular basis.

ARHI 4440/6440. American Modernism 1900-1946. 3 hours.

Prerequisite: Permission of department.

The creation of radical forms of artistic expression, and their seeming rejection by the Regionalists in relation to two world wars, the modern city, the depression, and revolutions in space, time, and technology. Special emphasis will be placed on the diverse group of artists mentored by Alfred Stieglitz. Offered on a regular basis.

ARHI 4500/6500. Realism and Impressionism. 3 hours.

Prerequisite: Permission of department.

The rise and development of naturalism in mid-nineteenth-century art in Europe. Offered on a regular basis.

ARHI 4510/6510. Modern Art in Europe from 1886 to 1918. 3 hours.

Prerequisite: Permission of department.

Painting and sculpture from Post-Impressionism to the end of World War I, the Cubo-Futurist rev-

olution and approaches to expressionism and abstraction. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4520/6520. Spirituality in Modern Art. 3 hours.

Prerequisite: ARHI 3050 or ARHI 3060 or ARHI 3070 or permission of department.

Myth and spirituality in the abstract art of the late nineteenth and twentieth centuries, as exemplified in Gauguin, Kandinsky, Klee, Brancusi, Pollock, and Rothko, among others. Offered on a regular basis.

ARHI 4540/6540. European Art Between the Great Wars. 3 hours.

Prerequisite: Permission of department.

High modernism in the twentieth century. Topics include Dada, Constructivism, Surrealism, the Bauhaus, and other major trends between the two World Wars. Offered on a regular basis.

ARHI 4550/6550. Art Since 1945. 3 hours.

Prerequisite: Permission of department.

Major artists and movements in art after 1945. Offered on a regular basis.

ARHI 4600/6600. Art of India. 3 hours.

Prerequisite: ARHI 3040 or permission of department.

Traditional art of India from the Indus valley civilization to the Muslim conquest. Major monuments of architecture, sculpture, and painting are investigated in the context of political and religious developments in the Indian subcontinent, including influences of the Indic religions of Buddhism, Hinduism, and Jainism. Offered on a regular basis.

ARHI 4610/6610. Arts of China. 3 hours.

Prerequisite: ARHI 3040 or permission of department.

Major trends in the arts of China from the Neolithic age to the eve of the modern period, ca. 2500 BCE to the nineteenth century CE. Factors affecting important developments in style and subject matter will be studied in the context of contemporary cultural phenomena. Offered on a regular basis.

ARHI 4620/6620. Japanese Art. 3 hours.

Prerequisite: ARHI 3040 or permission of department.

History of Japanese art of the proto-historic period to the exposure of Japan to the West in the mid-nineteenth century. The Buddhist arts of Japan during the imperial period, the evolution of Japanese pictorial art, religious and secular architecture, and Shinto-influenced arts. Offered on a regular basis.

ARHI 4700/6700. Guided Foreign Study. 3 hours.

Prerequisite: Permission of department.

Travel to selected works in foreign collections, and sites. Local library, archival resources used. Preparatory and on-site lecture and discussion. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4710/6710. Guided Foreign Study. 3 hours.

Prerequisite: ARHI 4500/6500.

Various topics related to Italian art. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4900/6900. Topics in Ancient and Medieval Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in Ancient and Medieval art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4910/6910. Topics in Renaissance and Baroque Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in Renaissance and Baroque art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4920/6920. Topics in Modern Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in modern art and architecture from Europe or America treated in depth. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4930/6930. Topics in Asian or Non-Western Art. 3 hours.

Prerequisite: ARHI 4600/6600 or ARHI 4610/6610 or ARHI 4620/6620 or permission of department.

Particular topics in Asian and non-western art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4940/6940. Gender Issues and Art History. 3 hours.

Prerequisite: Permission of department.

The impact of feminist theory and gay and lesbian studies on recent art historical scholarship. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 4950/6950. Independent Study. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Special projects in fields in which the student has demonstrated the ability to conduct research and write a fully and correctly annotated paper. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 7000. Master's Research. 1-12 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department. Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ARHI 7300. Master's Thesis. 1-12 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department. Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ARHI 8110. Special Problems in Art History. 3 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department. Individual research and/or group presentation and discussion of specific problems. Course may be taken through UGA Studies Abroad program in Cortona. Not offered on a regular basis.

ARHI 8120. Directed Study in Art History. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Individual research related to specific problems. Non-Traditional Format: Directed study. Not offered on a regular basis.

ARHI 8580. Seminar in Renaissance Art. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Problems in European art during the Renaissance. May include topics oriented toward a single major figure, a genre, or a school. Problems concern a major branch of art history, e.g., connoisseurship or iconography. Offered on a regular basis.

ARHI 8600. Seminar in Italian Baroque Art. 3 hours. Repeatable for maximum 6 hours credit. Focus on a single Italian Baroque artist, or on a regional school. Works of art and relevant literature provide materials for training in how to solve art historical problems using techniques developed in connoisseurship, iconography, and source material interpretation. Offered on a regular basis.

ARHI 8700. Seminar in Greco-Roman Art. 3 hours. Repeatable for maximum 6 hours credit. Focus on a single genre of Greco-Roman art (e.g., freestanding Greek sculpture from the sixth century B.C.), or on a single aspect (e.g., Roman historical reliefs). Offered on a regular basis.

ARHI 8870. Seminar in Asian Art. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Research topics may include Hindu iconography, Chinese painting, pan-Asian Buddhist iconogra-

phy, the Hindu temple, and others. Offered on a regular basis.

ARHI 8910. Seminar in Nineteenth-Century European Art History. 3 hours. Repeatable for maximum 9 hours credit.

Issues relating to the visual arts. Studies of major artists or movements, and thematically directed projects. Offered on a regular basis.

ARHI 8920. Seminar in Twentieth-Century Art History. 3 hours. Repeatable for maximum 9 hours credit.

Issues relating to the visual arts. Topical studies of major artists or movements, and thematically directed projects. Offered on a regular basis.

ARHI 8990. Seminar in the American Art. 3 hours. Repeatable for maximum 9 hours credit. Topical studies of major artists, exhibitions, movements, or cultural productions significant to the development of American art. Offered on a regular basis.

Art Interior Design

ARID 7890. Interior Design I. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department. Special problems in the planning of architectural spaces for public and residential uses. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARID 7900. Interior Design II. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department. The designing of special equipment: furniture, built-in equipment, special lighting, and custom design. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARID 7910. Interior Design III. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department. Individual creative problems and coordination of special aspects of interiors from concept to construction documentation and presentation. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARID 7920. Procedures in Interior Design. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department. The procedures and practice of interior design problem-solving with emphasis on research methodologies. Non-Traditional Format: Directed study. Offered fall and spring semesters.

Studio Art

ARST 4800/6800. Special Topics in Computer Art. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of major.

Computer-generated art and design including advanced computer generated imaging, computer aided drafting, scanned image manipulation, animation, desktop publishing and presentation, and two-dimensional and three-dimensional representation of fiber and sculpture arts. Offered fall and spring semesters.

ARST 4810/6810. Three-Dimensional Computer Art. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 4800/6800 and permission of major.

Three-dimensional, computer-generated art using modelling, rendering, animation, and output technique. Offered fall and spring semesters.

ARST 4820/6820. Computer Aided Design. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 4800/6800.

Contemporary concepts and trends in art computing. The development and presentation of a substantial body of individual imagery is a major aspect of the course. Offered fall and spring semesters.

ARST 4910/6910. Aspects of Folk Culture. 3 hours.

Art of folk, self-taught, and visionary artists as distinct from mainstream and academic traditions. Offered fall and spring semesters.

ARST 6020. Figure Drawing/Anatomy. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3000.

Figure drawing with consideration of the human skeletal and muscular systems, surface anatomy, and bio-mechanical concerns. Offered fall, spring, and summer semesters.

ARST 6160. Painting Materials and Techniques. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 3110.

Historical techniques such as egg tempera, fresco, encaustic, and Venetian mode oil painting as they apply to contemporary needs; modern materials such as alkyd and polymer resins are introduced. Consideration is given to the properties of pigments, binders, grounds, and supports. Offered fall and spring semesters.

ARST 6210. Color Photography. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 3200.

Fundamentals of color photography, including color theory, color temperature, lighting, and color

printing. Concepts are presented in the context of contemporary trends and practices. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 6220. Medium and Large Format. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 3200.

Medium and large format cameras using roll, pack, and sheet films. Techniques of advanced camera handling, lighting, film processing, and refined printing. Historical and contemporary practices considered. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 6230. Internship in Photography. 3-6 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ARST 2200.

Practical experience with professionals, including photographers, designers, and computer specialists. Independent projects and research with editors, curators, teachers, and historians. Assist photography faculty in creative work with emphasis on studio and lab production. Course may be taken through UGA Studies Abroad program in Cortona. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

ARST 7000. Master's Research. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ARST 7020. Drawing and Composition. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Projects in drawing including individual and group critiques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7030. Drawing and Composition. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 7020.

A continuation of Drawing and Composition. Projects in drawing, including individual and group critiques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7040. Drawing and Composition. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 7030.

Studio work in drawing, with consideration of relationship of principles to picture structure. Readings in art history and criticism. Course may be taken through UGA Studies Abroad program in

Cortona. Offered fall, spring, and summer semesters.

ARST 7110. Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Projects in painting, including individual and group critiques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7120. Painting. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 7110.

A continuation of Painting. Projects in painting, individual and group critiques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7130. Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Studio work in painting with consideration of theoretical issues. Readings in art criticism and aesthetics. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7200. Photography. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 6210 and ARST 6220.

Advanced applications of the medium. Experimental camera handling and laboratory work is emphasized. Intensive practice of traditional and new technologies from the phoram to the electronic image. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7210. Special Topics in Photography. 3 hours. Two lectures and two 1-hour lab periods.

Prerequisite: ARST 6210 and ARST 6220.

Major historical movements in photography, including comparative studies of contemporary trends and criticism with an emphasis on research and the development of library archives. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7230. Graduate Photography I. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 7200.

Practice of the photographic medium. Emphasis is placed on learning advanced techniques in the context of artistic expression. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7240. Graduate Photography II. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 7230.

A continuation of Graduate Photography I. Emphasis is placed on the proposal of art projects to be worked on in preparation for graduate exit studio. Offered fall and spring semesters.

ARST 7300. Master's Thesis. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ARST 7310. Book Art and Papermaking. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Hand papermaking as a support for other media and as a creative medium in two- or three-dimensional form. The book is examined in structure and content with skills learned in various binding techniques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7320. Book Art and Letterpress. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 7310.

Hand printing and letterpress synthesizing text and image in a narrative, serial, sequential, or experimental fashion. The book as a multiple is examined in structure and content with skills learned in binding and printing techniques. Offered fall, spring, and summer semesters.

ARST 7330. Advanced Printmaking. 3 hours. Repeatable for maximum 18 hours credit. Three 2-hour lab periods.

Advanced work in printmaking media, including the traditional intaglio processes; the various relief and planographic processes, and the combination of these various processes. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7370. Book Art and Papermaking. 3 hours. Three 2-hour lab periods.

Exploration of hand papermaking. Book is explored as an art form. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7410. Advanced Figure and Portrait Study in Sculpture. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Advanced figure modeling. Working from the model, emphasizing the structural and sculptural aspects of form. Anatomy and anatomical forms stressed. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7420. Sculpture Materials. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of major.

Formal three-dimensional concepts of sculpture applied to material or combinations of materials. In-depth work in cast bronze, cast cement, direct plaster, direct cement, fire clay, welded metal, stone, and wood. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7430. Construction Composition-Advanced Techniques in Metalcasting. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Production of wax models, venting, investing, casting, chasing, and mounting of finished work. Independent experimentation and study in cast bronze sculpture. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 7500. Ceramics. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Experimentation with ceramic forms, glazes, and firing techniques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7510. Technical Problems in Ceramics. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 7500.

Individual research in clay, glaze, and firing techniques directed towards personal style. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7520. Individual Research in Ceramics. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 7510.

Second year student begins to focus on individual style and cohesive, unified statement. Innovation in ceramic forms, glazes, and firing techniques. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7530. Individual Research in Ceramics. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 7520.

Refinement of ceramic techniques in form and surface elaboration with emphasis on individual style work that will become the M.F.A. final exhibition. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 7620. Jewelry and Metalwork. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Properties of various metals and how they relate to processes and function of form and aesthetics. Offered fall and spring semesters.

ARST 7630. Jewelry. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Jewelry making processes and development of individual interpretations of those processes and products. Offered fall and spring semesters.

ARST 7640. Metalwork. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Problems in design, forming, and constructing of metals, including copper, silver, and gold. Independent study and research for solutions to design problems. Offered fall and spring semesters.

ARST 7650. Metalwork. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 7640.

Design problems related to form and function with attention to surface embellishment and forming techniques. Offered fall and spring semesters.

ARST 7700. Fabric Design-Structure. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Problems in fabric structure for independent study. Research combining process with design. Offered fall and spring semesters.

ARST 7710. Fabric Design-Surface. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Problems in fabric decoration for independent study. Research technology combining dye, fiber, and application process with design and function or selection. Offered fall and spring semesters.

ARST 7750. History of Fabric Design. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Development of the fabric arts from prehistoric periods to the present in conjunction with studio projects. Offered fall and spring semesters.

ARST 7760. Japanese Fabrics. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Japanese fabrics in a historical and cultural context and their application to contemporary fiber art in conjunction with studio projects. Offered fall and spring semesters.

ARST 7770. Peruvian Fabrics. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Peruvian fabrics in historical and cultural context and their application to contemporary fiber art in conjunction with studio projects. Offered fall and spring semesters.

ARST 7980. Directed Study in Major Studio Area. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Individual studio projects and investigation of specific problems under the direction of faculty members. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

ARST 8000. General Art. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 7980 and permission of department.

Individual projects in drawing, painting, sculpture, jewelry and metalwork, fabric design, ceramics, and/or mixed media. Non-Traditional Format: Individual projects in art. Offered fall, spring, and summer semesters.

ARST 8010. General Art. 3 hours.

Prerequisite: ARST 7980 and permission of department.

Individual projects in drawing, painting, sculpture, jewelry and metalwork, fabric design, ceramics, and/or mixed media. Non-Traditional Format: Individual projects in art. Offered fall, spring, and summer semesters.

ARST 9210. Graduate Exit Studio. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Project of original creative works of high professional standards, together with a written report in which use is made of photographs or drawings or both and a comprehensive exhibition of creative work. Non-Traditional Format: Independent creative work for master's exhibition. Offered fall, spring, and summer semesters.

Artificial Intelligence

Donald E. Nute, Jr., *Program Director*
Walter D. Potter, *Graduate Coordinator*,
542-0361
(Boyd Graduate Studies Building)

The interdisciplinary Master of Science program in artificial intelligence is intended to prepare students for careers as developers of artificial intelligence applications or for further graduate work in artificial intelligence

or related areas. The program includes foundational courses in computer science, linguistics, logic, philosophy, and psychology as well as specialized courses in artificial intelligence programming languages and techniques. Seminars emphasize knowledge based systems, natural language understanding, and logic programming.

Students are admitted to the program with degrees in many areas including business, computer science, education, linguistics, philosophy, and psychology. A liberal undergraduate education with some previous experience in computing is desirable. Most students must take a few undergraduate courses to satisfy prerequisites for required graduate courses. The required graduate courses are listed under their respective departments. Typically, required courses include: symbolic programming, artificial intelligence, symbolic logic, logic programming, and any two from knowledge based systems, computational intelligence, natural language processing, and computer vision/pattern recognition. Additional course requirements are satisfied by selecting optional courses. It normally takes two years to complete all prerequisites, all required courses, and the thesis.

A limited number of research assistantships are available. Prospective students who desire financial aid should apply to the graduate coordinator.

(ARTI)CSCI 4540/6540. Symbolic Programming. 3 hours.

Prerequisite: CSCI 1302 or permission of department.

Prerequisite or corequisite: CSCI(PHIL) 4550/6550.

Programming in LISP and PROLOG, with emphasis on artificial intelligence techniques. Other languages used for artificial intelligence work will be presented more briefly. Offered fall semester.

ARTI 7000. Master's Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ARTI 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ARTI 8000. Topics in Artificial Intelligence. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Special topics in artificial intelligence. Topics will vary. Consult the program director for the specific topics to be offered in a given year. Non-Traditional Format: Topics course. Not offered on a regular basis.

ARTI 8800. Directed Readings in Artificial Intelligence. 1-5 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Directed reading and research in artificial intelligence in area of student's special interest. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

Biochemistry and Molecular Biology

J. David Puett, *Head*
 Alan E. Przybyla, *Graduate Coordinator*,
 542-1728
 (Life Sciences Building)

The Department of Biochemistry and Molecular Biology is in the Franklin College of Arts and Sciences. It functions largely as a graduate department with programs of study leading to the MS and PhD degrees. There are 20 large research laboratories for biochemistry and molecular biology in the Life Sciences Building, a \$36 million facility completed in 1991. The building houses a fermentation plant with facilities for the large-scale production and processing of microorganisms, animal quarters and a large suite of plant growth chambers giving the department facilities to work with any type organism. Several faculty members have labs in the Complex Carbohydrate Research Center, which is housed in a \$10 million research building and is currently composed of six faculty members and 100 support personnel.

The research laboratories are equipped

with most of the specialized equipment required for modern biochemical research including automated amino acid analyzers, analytical and preparative ultracentrifuges, liquid scintillation counters, recording spectrophotometers, spectrofluorimeters and stopped-flow devices, electron paramagnetic resonance spectrometers, x-ray diffraction facilities, mass spectrometers, protein sequencers, DNA synthesizers, HPLCs, mini-computers and other specialized equipment.

Graduate students are usually admitted at the beginning of fall semester, but in special cases a student with previous experience may be admitted in January. Deadline for most fellowships and assistantships is January 15, but exceptional qualifications may lead to awards at other times.

In addition to the courses listed below, a number of interdisciplinary courses such as Nucleic Acids (GENE 8920) and Molecular Genetics (GENE 8930) are offered to interested students in the biochemistry and molecular biology graduate program. The listings in biology, botany, cellular biology, genetics, and microbiology should be consulted to determine the range of courses available to graduate students majoring in biochemistry and molecular biology. One year of a foreign language at the high school or college level is required for a master or doctoral degree.

BCMB 4010/6010. Biochemistry and Molecular Biology I. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

A comprehensive treatment of biochemistry and molecular biology stressing structures of biological molecules, including proteins, nucleic acids, carbohydrates, and lipids, enzymology and selected aspects of metabolism and bioenergetics. Offered fall semester.

BCMB 4020/6020. Biochemistry and Molecular Biology II. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

A comprehensive treatment of biochemistry and molecular biology stressing aspects of metabolism, metabolic regulation, bioenergetics, and recombinant DNA methodologies. Offered spring semester.

BCMB 4030L/6030L. Laboratory Techniques in Biochemistry and Molecular Biology. 3 hours.

One lecture and two 3-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Basic techniques in biochemistry and molecular biology, including enzyme assays and purification, nucleic acid purification and characterization, chromatography, spectroscopy, and other modern methods. Offered fall semester.

BCMB(CHEM) 4110/6110. Physical Biochemistry. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

The principles of physical chemistry applied to biological molecules and systems, including current approaches in structural biology. Offered fall semester.

BCMB 4120/6120. Human Biochemistry and Disease. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Integrated treatment of human biochemistry and selected topics on the biochemical basis of human disease. Examples will be given of inheritable and acquired disorders. Offered fall semester.

BCMB 4130/6130. Biotechnology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Applied aspects of biochemistry and molecular biology in various fields, with emphasis on the use of recombinant DNA methods and protein engineering. Offered spring semester.

BCMB 6000. General Biochemistry and Molecular Biology. 3 hours.

Not open to students with credit in BCMB 4010/6010, BCMB 4020/6020, BCMB 8010 or BCMB 8020.

Prerequisite: CHEM 2212 and CHEM 2212L.

Beginning intensive one-semester graduate-level course in biochemistry and molecular biology covering the structure and function of biological molecules, enzymology, metabolism, bioenergetics, and recombinant DNA technology. Offered fall semester.

BCMB 7000. Master's Research. 1-10 hours.

Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

BCMB 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

BCMB 8010. Advanced Biochemistry and Molecular Biology I. 4 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Advanced biochemistry and molecular biology stressing thermodynamic principles in biochemistry, structural biology, enzymology, and aspects of metabolism and bioenergetics. Offered fall semester.

BCMB 8020. Advanced Biochemistry and Molecular Biology II. 4 hours.

Prerequisite: BCMB 8010.

Advanced biochemistry and molecular biology stressing metabolism and bioenergetics, replication, transcription, RNA processing, genetic codes, translation, membrane transport, and signal transduction. Offered spring semester.

BCMB 8030. Introduction to Research in Biochemistry and Molecular Biology. 3 hours.

Prerequisite: Permission of department.

Overview of current departmental research and introduction to research facilities. Training and practical experience in oral presentation, scientific writing, and grant preparation. Offered fall semester.

BCMB 8040. Advanced Physical Biochemistry. 3 hours.

Prerequisite: Permission of department.

Principles in physical chemistry and biophysics to biological macromolecules, including structural biology, hydrodynamics, electronic and magnetic resonance spectroscopy, and crystallography. Offered spring semester.

BCMB 8050. Cellular and Molecular Biochemistry. 1 hour. Repeatable for maximum 5 hours credit.

Prerequisite: BCMB 8020 or permission of department.

Advanced molecular and cellular biochemistry, including structure, biosynthesis, and assembly of cell proteins and nucleic acids. Non-Traditional Format: Selected readings and meetings with speakers in the annual BMB Symposium. Offered spring semester.

BCMB 8060. Biochemistry and Molecular Biology Seminar. 2 hours. Repeatable for maximum 20 hours credit.

Prerequisite: BCMB 8020.

Seminar dealing with various topics in current biochemistry and molecular biology. Non-Traditional Format: Grading of A-F will be used when the student presents a seminar; grading of S/U will be used when attendance is required but a seminar is not given. Offered fall and spring semesters.

BCMB 8070. Research Seminar in Biochemistry and Molecular Biology. 1 hour. Repeatable for maximum 10 hours credit.

Prerequisite: BCMB 8010 or permission of department.

Seminar focused on current research in biochemistry and molecular biology. Offered fall, spring, and summer semesters.

BCMB 8080. Current Literature in Biochemistry and Molecular Biology. 1 hour. Repeatable for maximum 6 hours credit.

Prerequisite: BCMB 8020.

Journal club in selected topics in cell and molecular biochemistry. Not offered on a regular basis.

BCMB 8100. Advanced Topics in Biochemistry and Molecular Biology. 2 hours. Repeatable for maximum 10 hours credit.

Prerequisite: BCMB 8020.

Selected areas in current molecular and cell biochemistry. Topics will change on a regular basis. Not offered on a regular basis.

BCMB(CHEM) 8110. Advanced Topics in Protein Structure-Function Relationships. 3 hours.

Prerequisite: BCMB 8010.

The relationship of protein structure to biological function, including protein folding, conformation, stability, and enzyme mechanisms. Offered fall semester of even-numbered years.

BCMB 8120. Advanced Topics in Gene Expression. 2 hours.

Prerequisite: BCMB 8010.

Biochemistry and molecular biology of nucleic acids, with emphasis on biosynthesis, structure, and function. Offered spring semester of even-numbered years.

BCMB 8130. Advanced Topics in Glycobiology. 2 hours.

Prerequisite: BCMB 8010.

Complex carbohydrates and glycoconjugates, including biosynthesis, structure, and biological function. Offered fall semester of odd-numbered years.

BCMB 8140. Advanced Topics in Genomics and Bioinformatics. 2 hours.

Prerequisite: BCMB 8010.

Contemporary approaches in the genomics of bacteria, archaea and eucarya, including computer applications on the use of various data bases. Offered fall semester of odd-numbered years.

BCMB 8150. Advanced Topics in Cellular Communication and Regulation. 2 hours.

Prerequisite: BCMB 8010.

Molecular mechanisms of intra- and inter-cellular communication, including the role of hormones, cytokines, neurotransmitters and receptors. Offered spring semester of even-numbered years.

BCMB 8160. Advanced Topics in the Biochemical Basis of Human Disease. 2 hours.

Prerequisite: BCMB 8010.

The molecular and cellular basis of human disease with emphasis on genetic and acquired disorders. Offered spring semester of odd-numbered years.

BCMB 8170. Advanced Topics in Plant Biochemistry and Molecular Biology. 2 hours.

Prerequisite: BCMB 8010.

Advanced treatment of plant biochemistry and molecular biology, including photosynthesis and nitrogen fixation. Offered spring semester of odd-numbered years.

BCMB(CHEM) 8180. X-Ray Crystallography.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BCMB 8010 and BCMB 8040.

The basic principles of x-ray crystallography with major application to protein structure determination, including laboratories on crystallization techniques and data collection. Offered spring semester.

BCMB(CHEM) 8190. NMR Spectroscopy of Biomolecules. 3 hours.

Prerequisite: BCMB 8010 and BCMB 8040.

NMR spectroscopy with applications to proteins and other biopolymers. Special attention will be given to methods of structure determination. Offered fall semester of odd-numbered years.

BCMB(CHEM) 8200. Molecular Modeling and Structure Computations. 3 hours. One lecture and two 2- hour lab periods.

Prerequisite: BCMB 8010 or permission of department.

Modern biomolecular modeling and structure computations with emphasis on the application of molecular dynamics simulations to proteins, carbohydrates, and protein-ligand complexes. Lectures will be complemented with laboratory sections on the use of modeling software and computer hardware. Offered fall semester of even-numbered years.

(BCMB)CHEM 8220. Physical Methods in Inorganic and Bioinorganic Chemistry. 3 hours.

Prerequisite: CHEM 8210.

Physical methods used in inorganic and bioinorganic chemical research including UV/visible/near IR absorption spectroscopy, (magnetic) circular dichroism, electron paramagnetic resonance, nuclear magnetic resonance, Mossbauer and X-ray absorption spectroscopies, single crystal x-ray diffraction, and magnetochemistry. Offered spring semester.

(BCMB)CHEM 8250. Bioinorganic Chemistry. 3 hours.

Prerequisite: CHEM 6400 or BCMB 4010/6010.

Biological processes and molecules, mainly proteins and nucleic acids, which incorporate metal

ions. Topics include metal binding to biopolymers, the roles of metal ions in biological processes such as electron transfer, atom or group transfer, and the use of metal complexes as therapeutic agents. Offered fall semester of odd-numbered years.

(BCMB)CHEM 8330. Molecular Modeling. 3 hours.

Computational studies to calculate the structures of organic molecules. Specific training is given in the application of the molecular mechanics method and the MM-3 software package, ab initio calculations using the Gaussian software package, and other computational schemes. Evaluation of computational results. Not offered on a regular basis.

(BCMB)CBIO(MIBO) 8520. Topics in Biochemistry and Molecular Genetics of Parasites. 3 hours. Repeatable for maximum 6 hours credit. One lecture and two 1-hour lab periods.

Prerequisite: BCMB 8020 and GENE 8934. Parasite cellular biochemistry and molecular genetics with potential for rational drug design. Topics include DNA replication, RNA editing, nucleic acid salvage pathways, polyamine metabolism, and glycosylphosphatidylinositol (GPI) anchors. Offered on a regular basis.

(BCMB)CHEM 8810. Mass Spectrometry. 3 hours.

Modern methods of mass spectrometry covering fundamental principles, instrumentation, and data interpretation. New techniques for the structural analysis of biomolecules. Offered fall semester.

(BCMB)(BTNY)GENE 8964. Fungal Genetics. 2 hours.

Prerequisite: GENE 4204/6204 or permission of department.

Analysis of fungi for teaching classical and modern molecular approaches. Offered fall and spring semesters.

BCMB 8990. Problems in Biochemistry and Molecular Biology. 1-10 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department. Focused research, advanced readings, and tutorials with faculty members. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

BCMB 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

BCMB 9300. Doctoral Dissertation. 1-15 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Biology

Daniel V. DerVartanian, *Chairman*
(*Biological Sciences Building*)

The Division of Biological Sciences consists of the Departments of Biochemistry and Molecular Biology, Botany, Cellular Biology, Entomology, Genetics, Marine Sciences, Microbiology, the Institute of Ecology, and the Faculty of Cell and Developmental Biology. Degrees are granted only through the departments.

(BIOL)BTNY(CRSS) 4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL) 3204. Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems. Offered every year on a regular basis.

(BIOL)GENE 4604/6604. Evolutionary Biology. 3 hours.

Prerequisite: BIOL 1108-1108L. An introduction to the processes of evolution. Topics include population genetics, speciation, systematics, coevolution, chemical origin of life, history of life, geological record, and evolution of humans. Offered fall semester.

BIOL(CBIO)(VPAT) 5040/7040. Electron Microscopy. 3 hours.

Prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L. Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray microanalysis, image processing, and image analysis. Offered fall semester.

BIOL(CBIO) 5050L/7050L. Electron Microscopy Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite or corequisite: BIOL(CBIO)(VPAT) 5040/7040 or permission of department.

Operation of both transmission (TEM) and scanning electron microscopes (SEM). Preparation of specimens (ultramicrotomy, critical point drying, negative staining) for examination in both TEM and SEM. Basics of X-ray microanalysis. Offered fall and spring semesters.

BIOL 8000. Tropical Biology. 5-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Biological concepts pertaining to the tropics through intensive field study. Non-Traditional Format: This eight-week course meets seven days a week, fourteen hours a day; applications usually required before November 1 or April 1. Offered spring and summer semesters.

Botany

Alan J. Jaworski, *Head*

Gary D. Kochert, *Graduate Coordinator*,
542-1871

(Plant Sciences Building)

Graduate work leading to the MS or PhD degree in botany may be undertaken by qualified students. Within specifications set by the Graduate School (see General Degrees), all degree requirements are determined by the major professor and student in consultation with an advisory committee. Inquiries by prospective students should be addressed to: Graduate Coordinator, Department of Botany.

Facilities for graduate training in botany include greenhouses, growth chambers, field plots, a herbarium, culture collection of algae and fungi, electron microscope laboratory, molecular cytology facility, monoclonal antibody facility, fully equipped computer facilities, and modern research laboratories. Research opportunities are also offered in the University Computer Center, the Electron Microscopy Laboratory, the Institute of Ecology, and the Molecular Genetics Instrumental facility.

Field work may be done at the university marine laboratories at Sapelo and Skidaway Islands, The Savannah River Ecology Laboratory, and several inland sites ranging from the coastal plains to the Blue Ridge Mountains.

(BTNY)PATH 4200/6200-4200L/6200L. Introductory Mycology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Morphology, biology, and taxonomy of fungi. Representatives of all major groups of fungi are considered. Offered fall semester.

(BTNY)GEOG 4220/6220. Ecological Biogeography. 3 hours.

Prerequisite: GEOG 3210 or ECOL(BIOL) 3500-3500L.

Patterns of plant distribution in contemporary landscapes and underlying processes, including vegetation dynamics, disturbance ecology, biogeomorphology, dendrochronology, and environmental history. Offered spring semester.

BTNY 4230/6230-4230L/6230L. Plant Anatomy.

4 hours. Two lectures and two 2-hour lab periods. Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or (BTNY 1220-1220L and CBIO(BIOL) 3400) or permission of department.

Structure and growth of meristems; development and structure of cells, tissues, and tissue systems; comparative anatomy of stems, roots, leaves, flowers, and fruits; survey of recent advances in study of growth and development of form and emphasis on experimental approaches. Assumes elementary knowledge of cell and tissue structure. Offered fall semester.

(BTNY)GEOG 4240/6240. Plant Geography. 3 hours.

Prerequisite: BIOL 1104-1104L and (GEOG 1112 and GEOG 1112L) and [GEOG 3210 or ECOL(BIOL) 3500-3500L].

Phytogeographical zonation, plant-geographic processes, and current potential natural vegetation. Includes physical and environmental factors, plant-environment relationships, plant roles and types, vegetation dynamics, geographic responses to disturbance, and vegetation of main world biomes. Emphasis on global-scale patterns and relationships. Offered spring semester.

(BTNY)ANTH 4300/6300-4300L/6300L. Ethnobotany. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major. Ethnobotanical research, with focus on knowledge and utilization of the plant world in traditional societies. Comparisons of societies in tropical forest ecosystems and evaluation of issues relating to intellectual property rights and traditional peoples' knowledge of plant species with potential economic value. Not offered on a regular basis.

BTNY(BIOL)(CRSS) 4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL) 3204.

Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems. Offered every year on a regular basis.

(BTNY)CBIO 4600/6600-4600L/6600L. Biology of Protists. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

Protists (algae, protozoa, and zoospore fungi) with an emphasis on cell structure, evolution, and life histories. Laboratories will concentrate on examination of living and fixed materials and will include methods of isolation and culturing of protists. Offered spring semester of even-numbered years.

BTNY 4650/6650-4650L/6650L. Plant Taxonomy. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L or permission of department.

History of taxonomy, nomenclature, characters, identification principles, classification, taxonomic relationships, taxonomic literature, species biology, collecting and herbarium, floristic studies. Offered spring and summer semesters.

BTNY 4850/6850-4850L/6850L. Vegetation Analysis. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (ECOL(BIOL) 3500-3500L and STAT 6220) or permission of department.

Rationale and protocols for various methods of studying vegetation at the population, community and landscape levels. Both field sampling and data analysis techniques will be covered with introduction to several software packages. Offered spring semester of even-numbered years.

BTNY 6350-6350L. Molecular Systematics. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

Phylogenetic analysis, molecular systematic methods, relationships within the higher plants, algae, and fungi based upon analyses of DNA sequences and DNA-derived markers from nuclear and organellar genomes. Labs: computer-assisted techniques for phylogenetic analysis of macromolecular data; individual projects involving the analysis of DNA sequence data. Offered spring semester of even-numbered years.

BTNY 6710-6710L. Principles of Plant Systematics. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

Systematics, nomenclature, rank and taxa, phylogenetic and phenetic methods, problem design, analytical procedures, data presentation, identification of special groups, classification, phylogenetic relationships, literature and bibliographic aids. Labs: morphology and arrangement of selected phylogenetically significant families; literature-based study of small genus or species complex. Offered fall semester of even-numbered years.

BTNY 6720-6720L. Plant Variation and Evolution. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: GENE(BIOL) 4604/6604.

Variation and evolution in plants, genotypic and phenotypic patterns, genetic diversity, adaptation, breeding systems, polyploidy, hybridization, apomixis, evolutionary data in population genetics and systematics, literature, experimental design, population sampling. Variation analysis, breeding techniques, data presentation, population analysis, molecular evolution. Offered fall semester of even-numbered years.

BTNY 6830. Plant Physiology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100.

Plant physiology for students with cell physiology or biochemistry background. Water relations, mineral nutrition, transport of materials, respiration, photosynthesis, growth and development. Offered spring semester of even-numbered years.

BTNY 7000. Master's Research. 1-10 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

BTNY 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 14 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

BTNY 7360. Teaching Internship in Biological Sciences. 1-2 hours. Repeatable for maximum 10 hours credit. 1-2 lab periods of 1-2 hours per week.

Classroom teaching experience in undergraduate courses under the direct supervision of a faculty member. Offered fall, spring, and summer semesters.

BTNY 8020. Introduction to Botanical Research. 1-2 hours.

Prerequisite: Permission of department.

The breadth of current botanical research with the facilities available for botanical research. Offered fall semester.

BTNY 8040. Botanical Research. 1-3 hours. Repeatable for maximum 6 hours credit. 1-3 lab periods of 3 hours per week.

Faculty-directed, laboratory, or literature research of a botanical problem. Not for thesis or dissertation research. Offered fall, spring, and summer semesters.

BTNY 8100. Plant Molecular, Cellular, and Developmental Biology I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or GENE(BIOL) 3204.

Plant genetics, gene expression, and gene evolution. Structural, physiological, and genetic properties of organelles, membranes, and the cell wall. Topics are interrelated with those of Plant Molecular, Cellular, and Developmental Biology II. Offered fall semester.

BTNY 8110. Plant Molecular, Cellular, and Developmental Biology II. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: BTNY 8100.

Plant cell structure, growth and development, reproduction and environmental responses. Topics are interrelated with those in Plant Molecular, Cellular, and Developmental Biology I. Offered spring semester of even-numbered years.

(BTNY)ECOL 8120-8120L. Plant Reproductive Ecology. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: Permission of department.

Pollination ecology, breeding systems, patterns of gene flow via pollen and seed dispersal, flower arrangement and phenology, and implications of reproductive biology for demography. Group and individual laboratory projects. Not offered on a regular basis.

BTNY 8140. Algal Ecology. 2 hours.

Prerequisite: CBIO(BTNY) 4600/6600-4600L/6600L or permission of department.

Physiological ecology of algae found in various habitats, including phytoplankton, benthic microalgae, seaweeds, and symbiotic associations. Offered spring semester of even-numbered years.

(BTNY)PATH 8210-8210L. Biology of Ascomycetes. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Comparative morphology of ascomycetes and their asexual stages; principles of taxonomy and

training in identification. Offered fall semester of even-numbered years.

BTNY 8230. Monoclonal Antibodies as Research Tools. 5 hours. Two lectures and three 3-hour lab periods.

Prerequisite: BCMB 6000.

The theoretical and practical aspects of antibodies as research tools in the life sciences. Production of both polyclonal and monoclonal antibodies will be considered, as well as their applications for immunovisualization, immunopurification, immunoquantitation, and other analytical applications. Offered fall semester.

(BTNY)ECOL(FORS) 8310. Population Ecology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and permission of department.

Advanced ecological theory to biological populations. Mathematical and evolutionary treatment of population growth and regulation, niche theory, foraging theory, predator-prey theory, habitat selection, and competition. Offered fall semester.

BTNY(PATH) 8320-8320L. Zoospore Fungi and Slime Molds. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Comparative biology of zoospore fungi and slime molds as organisms. Topics include current research in morphology and development, phylogeny, physiology, ecology and the use of selected organisms as model systems. Laboratory will emphasize isolation and cultivation of these organisms and demonstration of their reproductive stages. Offered fall semester of odd-numbered years.

BTNY 8340-8340L. Experimental Mycology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

Fungal biology and ecology and the use of fungi as experimental organisms in the study of development and molecular biology and genetics. Not offered on a regular basis.

BTNY 8360. Fungal Ecology. 3 hours.

Prerequisite: PATH(BTNY) 4200/6200-4200L/6200L.

The role of fungi in the environment. Topics include fungal populations; biotic interactions with plants, insects, and other fungi; decomposition and nutrient cycling; fungal biomass and productivity; fungi in extreme environments. Offered fall semester of even-numbered years.

BTNY(ECOL) 8410. Community Ecology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL 4010/6010-4010L/6010L and STAT 4220.

The applicability of advanced theory to multi-species communities. Patterns and processes that influence species composition, diversity, and function. Topics include deterministic vs. stochastic regulation, succession, resource partitioning, patch dynamics, island biogeography, and food webs. Offered spring semester.

BTNY 8600. Aquatic Plants. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1103-1103L or BIOL 1104-1104L or BTNY 1210-1210L or BTNY 1220-1220L or permission of department.

Identification and biology of aquatic macrophytes with emphasis on field work. Non-Traditional Format: Local and over-night field trips required. Offered fall semester of odd-numbered years.

BTNY 8700. Plant Population and Biology Seminar. 1-2 hours. Repeatable for maximum 15 hours credit. 1-2 lab periods of 2 hours per week.

Prerequisite: Permission of department.

Seminar on current research topics in plant population biology. Offered fall and spring semesters.

BTNY 8770. Communities and Ecosystems. 3 hours.

Advanced synthesis of physiological, population, community, and ecosystem studies in the major terrestrial plant associations of the world. Offered spring semester of even-numbered years.

BTNY 8800. Plant Systematics and Evolution Seminar. 1-2 hours. Repeatable for maximum 16 hours credit. 1-2 lab periods of 2 hours per week.

Seminar on current botanical research topics. Offered spring semester of odd-numbered years.

BTNY 8810. Mycology Seminar. 1-2 hours. Repeatable for maximum 15 hours credit. 1-2 lab periods of 2 hours per week.

Seminar on current botanical research topics. Offered fall semester.

BTNY 8820. Plant Physiology Seminar. 1-2 hours. Repeatable for maximum 15 hours credit. 1-2 lab periods of 2 hours per week.

Seminar on current botanical research topics. Not offered on a regular basis.

BTNY 8840. Plant Ecology Seminar. 1-2 hours. Repeatable for maximum 18 hours credit. 1-2 lab periods of 2 hours per week.

Seminar on current plant ecology and related research topics. Not offered on a regular basis.

BTNY 8850-8850L. Terrestrial Biogeochemical Cycling. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: ECOL(BIOL) 3500-3500L or STAT 4210 or STAT 4220.

Plant processes which mediate biogeochemical cycling on land. Includes survey of global element cycling, functions of essential elements, element

acquisition, translocation and loss by plants, litter decomposition, and methods of estimating standing stocks of elements in and transfer rates of elements between ecosystem components. Offered spring semester of odd-numbered years.

BTNY 8860. Plant Anatomy, Morphology, and Cell Biology Seminar. 1-2 hours. Repeatable for maximum 18 hours credit. 1-2 lab periods of 2 hours per week.

Seminar on current topics in plant anatomy, morphology, and cell biology. Not offered on a regular basis.

BTNY 8890-8890L. Plant Physiological Ecology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: BTNY 6830.

Energy balances, water relations, stomatal physiology, gas exchange, environmental aspects of mineral nutrition, stress physiology, and productivity. Offered spring semester of odd-numbered years.

(BTNY)CRSS 8900. Advanced Plant Genetics. 3 hours.

Prerequisite: BTNY 8100 or CRSS 8890-8890L or permission of department.

Recent developments in plant genetics: sexual incompatibilities and somatic hybridization, genetic engineering; RFLPs and other molecular markers, linkage and mapping; cytoplasmic genetics; and classic papers. Offered every odd-numbered year on a regular basis.

(BTNY)(BCMB)GENE 8964. Fungal Genetics. 2 hours.

Prerequisite: GENE 4204/6204 or permission of department.

Analysis of fungi for teaching classical and modern molecular approaches. Offered fall and spring semesters.

BTNY 8970. Current Topics in Research. 1-2 hours. Repeatable for maximum 15 hours credit. 1-2 lab periods of 2 hours per week.

Subjects of current interest in plant research. Current literature and modern analysis of research results. Course is designed to meet the specific research needs of the student. Not offered on a regular basis.

BTNY 8980. Special Topics in Botany. 1-2 hours. Repeatable for maximum 18 hours credit. 1-2 lab periods of 2 hours per week.

Discussion of selected topics in plant biology. Not offered on a regular basis.

BTNY 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

BTNY 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Cellular Biology

Raymond T. Damian, *Head*

Charles H. Keith, *Graduate Coordinator*,
542-3310

(*Biological Sciences Building*)

The Department of Cellular Biology offers MS and PhD degrees. Requirements for the MS include 24 hours of course work, satisfactory performance on written and oral examinations, and an acceptable thesis embodying original research in a specialized area. Requirements for the PhD include: satisfactory performance on written and oral examinations; fulfillment of a departmental research skills requirement; and an acceptable dissertation. Course work is determined by the advisory committee to suit each student's program. Incoming students are required to take CBIO 6130 Introduction to Research in Cellular Biology, offered in the Fall semester only.

The department's research strengths are in cell biology, integrative physiology, and molecular cell parasitology. Facilities for graduate training include campus laboratories fully equipped with computers and modern instrumentation for cell sorting and image analysis, electron and confocal microscopy, molecular biology, radioisotope studies, and animal rooms. Available off-campus facilities include the Yerkes Primate Center in Atlanta and its field station in Lawrenceville, Georgia. The department also has strong working relationships with the Centers for Disease Control in Atlanta and Chamblee, Georgia, and with several laboratories in Brazil.

Contact the Graduate Coordinator, Dr. Charles H. Keith, if you have questions regarding the graduate program.

CBIO(MIBO) 4100/6100. Immunology. 3 hours. Prerequisite: BCMB(BIOL)(CHEM) 3100 and GENE(BIOL) 3204.

Immunology from an experimental perspective. Anatomy, development, and function of the immune system. Immune system in infectious diseases. Mechanisms and pathogenesis of immunological disorders. Evolution of immunological concepts. Offered fall semester.

CBIO 4340/6340. Biology of Aging. 3 hours.

Prerequisite: Permission of department.

Biological processes accompanying aging in human and other organisms. Emphasis on physiological decline; theoretical explanations; attempts to prolong life; and the utility and limitations of model systems used to analyze human aging. Offered spring semester.

CBIO 4500/6500-4500L/6500L. Medical Parasitology. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: BIOL 1108-1108L.

Major protozoan and metazoan endo- and ectoparasites of humans. Principles of parasitism and general biology of each parasite. Vector biology, epidemiology, control, and treatment of parasitic diseases are discussed. Laboratory stresses diagnosis and identification, and introduces pathology through the use of fixed and living material. Offered spring semester of odd-numbered years.

CBIO(BTNY) 4600/6600-4600L/6600L. Biology of Protists. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

Protists (algae, protozoa, and zoospore fungi) with an emphasis on cell structure, evolution, and life histories. Laboratories will concentrate on examination of living and fixed materials and will include methods of isolation and culturing of protists. Offered spring semester of even-numbered years.

CBIO 4730/6730. Endocrinology. 3 hours.

Prerequisite: BIOL 1108-1108L or permission of department.

Vertebrate endocrinology and the principles of chemical integration, emphasizing the physiology of regulatory mechanisms and the cellular and molecular bases of hormone action. Offered fall semester.

(CBIO)BIOL(VPAT) 5040/7040. Electron Microscopy. 3 hours.

Prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L.

Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray

microanalysis, image processing, and image analysis. Offered fall semester.

(CBIO)BIOL 5050L/7050L. Electron Microscopy Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite or corequisite: BIOL(CBIO)(VPAT) 5040/7040 or permission of department.

Operation of both transmission (TEM) and scanning electron microscopes (SEM). Preparation of specimens (ultramicrotomy, critical point drying, negative staining) for examination in both TEM and SEM. Basics of X-ray microanalysis. Offered fall and spring semesters.

CBIO 6130. Introduction to Research in Cellular Biology. 1 hour. Two 1-hour lab periods.

Introduces new Cellular Biology graduate students to research in the department, to research facilities, to the Science Library, and to laboratory safety. Professional ethics and responsibilities. Offered fall semester.

CBIO 6400. Intermediate Cell Biology. 3 hours. One 3-hour lab period.

Prerequisite: Permission of department.

Beginning graduate-level cell biology. Experiments that have led to our current understanding of cellular architecture, cell cycle, cell signaling, nucleic acid and protein synthesis, membrane phenomena, organellogenesis, energy transductions, and cellular control mechanisms. Offered fall semester.

CBIO 7000. Master's Research. 1-15 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CBIO 7300. Master's Thesis. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CBIO 8050-8050L. Techniques in Modern Microscopy. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: (PHYS 1112-1112L or PHYS 3330-3330L) and permission of department.

Modern microscopical techniques: brightfield, phase, DIC, fluorescence, confocal, scanning tunneling, and scanning and transmission electron microscopy. Related techniques: X-ray microanalysis photomicrography, and image analysis and processing. Offered spring semester of odd-numbered years.

CBIO 8100. Advanced Immunology. 3 hours. Three 1-hour lab periods.

Prerequisite: CBIO(MIBO) 4100/6100 or MMIB 4100/6100-4100L/6100L or permission of department.

Immunology with emphasis on underlying mechanisms of development and function of the immune system. Students will critically evaluate current literature and design experiments to test hypotheses. Offered spring semester of even-numbered years.

CBIO 8300. Advanced Developmental Biology. 3 hours.

Prerequisite: [GENE(BIOL) 3204 and CBIO (BIOL) 3400] or permission of department.

Experimental analysis of invertebrate and vertebrate development. Offered spring semester.

CBIO 8400. Advanced Cell Biology. 3 hours.

Structure and function of living cells. Biological questions, molecular mechanisms, and experimental approaches. Offered spring semester of odd-numbered years.

CBIO 8480. Advanced Topics in Cell Biology. 1-5 hours. Repeatable for maximum 5 hours credit.

Current cell biological research using sources in the primary literature.

Non-Traditional Format: Independent research under the direction of a faculty member. Not offered on a regular basis.

CBIO 8490. Cell Biology Seminar. 1 hour. Repeatable for maximum 6 hours credit. One 1-hour lab period.

Weekly discussion of current research in cell biology. Student presentations and development of public speaking skills. Not offered on a regular basis.

CBIO 8500. Biology of Parasitism. 4 hours. Three lectures and one 1-hour lab period.

Prerequisite: [CBIO(MIBO) 4100/6100 and CBIO 4500/6500-4500L/6500L and BCMB 8020 and GENE 8924] or permission of department.

Parasitism and host-parasite interactions from cell biological, immunological, biochemical and molecular biological perspectives. Major protozoan and helminth parasites of humans, and unique aspects of immunity to parasites and parasite cellular biochemistry and molecular genetics. The control of parasites via vaccine development and chemotherapy. Offered spring semester.

CBIO(BCMB)(MIBO) 8520. Topics in Biochemistry and Molecular Genetics of Parasites. 3 hours. Repeatable for maximum 6 hours credit.

One lecture and two 1-hour lab periods.

Prerequisite: BCMB 8020 and GENE 8934.

Parasite cellular biochemistry and molecular genetics with potential for rational drug design. Topics include DNA replication, RNA editing, nucleic

acid salvage pathways, polyamine metabolism, and glycosylphosphatidylinositol (GPI) anchors. Offered on a regular basis.

CBIO(PARA)(POUL) 8560. Seminar in Parasitology. 1 hour. Repeatable for maximum 3 hours credit. One 1-hour lab period.

Weekly discussion of parasitological topics. Not offered on a regular basis.

CBIO 8580. Advanced Topics in Parasitology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: CBIO 8500.

Topics in parasitology and host-parasite interactions. Either cell biological/immunological or biochemical/molecular genetic aspects of parasites. Not offered on a regular basis.

CBIO 8700. Membrane Transporters—Pumps, Carriers, and Channels. 2 hours. Two 2-hour lab periods.

Prerequisite: Permission of department.

Identification, mechanism, roles, and regulation of membrane transport pathways. Offered fall semester of even-numbered years.

CBIO 8730. Advanced Cell and Molecular Endocrinology. 2 hours. Repeatable for maximum 8 hours credit. Two 1-hour lab periods.

Prerequisite: CBIO 4730/6730 or permission of department.

Modern vertebrate endocrinology, emphasizing special topics in research of physiological regulatory mechanisms and the molecular bases for hormone actions. Offered fall semester of even-numbered years.

CBIO 8920L. Cellular Biology Research Techniques. 1-2 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Corequisite: CBIO 6130.

Student rotations in the research laboratories of faculty members. Not for thesis or dissertation. Non-Traditional Format: By arrangement with faculty member. Offered fall and spring semesters.

CBIO 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CBIO 9010. Problems in Cellular Biology. 1-3 hours. Repeatable for maximum 15 hours credit. 1-3 lab periods of 2-6 hours per week.

Approved problems in cellular biology. Offered fall and spring semesters.

CBIO 9300. Doctoral Dissertation. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Chemistry

Robert A. Scott, *Head*

I. Jonathan Amster, *Graduate Coordinator*,
542-1936

(Chemistry Building)

The Department of Chemistry offers courses of study and research leading to the Master of Science and Doctor of Philosophy degrees. The candidate for the Master of Science degree must complete a program of study approved by his/her major professor, the graduate coordinator, and the dean of the Graduate School. The student must complete and defend a thesis based upon his/her research. This research should involve contributions of a publishable quality.

The PhD applicant chooses a major concentration in analytical, inorganic, organic, or physical chemistry. A program of study including course work in the major field and the student's research objectives must be completed and approved by the major professor, the graduate coordinator, and the dean of the Graduate School. After satisfactorily completing his/her prescribed course of study and a comprehensive written and oral examination in his/her major field, the student is officially admitted to candidacy for the PhD degree. This degree is awarded for proficiency and scholarship in research and a thorough acquaintance with a specific field of knowledge which the candidate demonstrates by the presentation and defense of a dissertation based upon independent work which contributes significantly to knowledge in the student's field.

Unless otherwise specified, all laboratory periods are three hours.

(CHEM)BCMB 4110/6110. Physical Biochemistry. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

The principles of physical chemistry applied to biological molecules and systems, including current approaches in structural biology. Offered fall semester.

CHEM 4190/6190. Introduction to NMR Spectroscopy. 3 hours. Two lectures and one 3-hour lab period.

Instrumental aspects of NMR spectroscopy including pulsed Fourier transform techniques, proton and carbon-13 techniques used in the analysis of organic compounds, polypeptides and other small molecules. The focus is on the operation of NMR spectrometers presently available in the University of Georgia's Department of Chemistry. Offered fall semester.

CHEM 6400. Intermediate Inorganic Chemistry. 3 hours.

Modern theories of bonding, structure, reaction mechanisms, and synthetic methods in inorganic, organometallic, and bioinorganic chemistry. Offered fall semester.

CHEM 6911. Physical Chemistry I. 4 hours.

Fundamental principles of physical chemistry. Kinetic molecular theory, thermodynamics, equilibria, electrochemistry. Offered fall semester.

CHEM 6912. Physical Chemistry II. 4 hours.

Prerequisite: CHEM 6911.

Fundamental principles of physical chemistry. Reaction kinetics, quantum mechanics, and molecular spectroscopy. Offered spring semester.

CHEM 7000. Master's Research. 1-10 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CHEM 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

(CHEM)BCMB 8110. Advanced Topics in Protein Structure-Function Relationships. 3 hours.

Prerequisite: BCMB 8010.

The relationship of protein structure to biological function, including protein folding, conformation, stability, and enzyme mechanisms. Offered fall semester of even-numbered years.

CHEM 8120. Inorganic Chemistry Graduate Seminar. 1 hour. Repeatable for maximum 10 hours credit.

Current topics in inorganic or bioinorganic chemistry. Training in oral and visual presentation of inorganic and bioinorganic chemical research. Non-Traditional Format: Grading system of A/S is required. Normally S/U grades are given for attendance and participation in discussion. A/F

grades are given when a student makes a presentation. Offered fall and spring semesters.

CHEM 8130. Organic Chemistry Graduate Seminar. 1 hour. Repeatable for maximum 10 hours credit.

Current topics in organic chemistry. Presentations are given by visiting scientists, UGA faculty and students. Training is given in oral and visual presentations of organic chemistry research. Non-Traditional Format: Grading system of A/S is required. Normally S/U grades are given for attendance and participation in discussion. A/F grades are given when a student makes a presentation. Offered fall and spring semesters.

CHEM 8140. Physical Chemistry Graduate Seminar. 1 hour. Repeatable for maximum 10 hours credit.

Current topics in physical chemistry and chemical physics. Presentations will be given by visiting speakers, by UGA chemistry faculty, and by students. Training will be provided in oral and visual presentations of physical chemistry research. Non-Traditional Format: Grading system of A/S is required. Normally S/U grades are given for attendance and participation in discussion. A/F grades are given when a student makes a presentation. Offered fall and spring semesters.

CHEM 8150. Analytical Chemistry Graduate Seminar. 1 hour. Repeatable for maximum 10 hours credit.

Current topics in analytical chemistry. Presentations by visiting speakers, UGA faculty and students. Training in oral and visual presentations of analytical chemical research. Non-Traditional Format: Grading system of A/S is required. Normally S/U grades are given for attendance and participation in discussion. A/F grades are given when a student makes a presentation. Offered fall and spring semesters.

(CHEM)BCMB 8180. X-Ray Crystallography.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BCMB 8010 and BCMB 8040.

The basic principles of x-ray crystallography with major application to protein structure determination, including laboratories on crystallization techniques and data collection. Offered spring semester.

(CHEM)BCMB 8190. NMR Spectroscopy of Biomolecules. 3 hours.

Prerequisite: BCMB 8010 and BCMB 8040.

NMR spectroscopy with applications to proteins and other biopolymers. Special attention will be given to methods of structure determination. Offered fall semester of odd-numbered years.

(CHEM)BCMB 8200. Molecular Modeling and Structure Computations. 3 hours. One lecture and two 2- hour lab periods.

Prerequisite: BCMB 8010 or permission of department.

Modern biomolecular modeling and structure computations with emphasis on the application of molecular dynamics simulations to proteins, carbohydrates, and protein-ligand complexes. Lectures will be complemented with laboratory sections on the use of modeling software and computer hardware. Offered fall semester of even-numbered years.

CHEM 8210. Chemical Applications of Group Theory. 3 hours.

The description of chemical bonding and other properties of organic and inorganic molecules in terms of group theory and symmetry. Topics include molecular symmetry and point groups, group theory and quantum mechanics, and symmetry aspects of molecular orbital theory, chemical reactions, ligand field theory and molecular vibrations. Offered fall semester.

CHEM(BCMB) 8220. Physical Methods in Inorganic and Bioinorganic Chemistry. 3 hours.

Prerequisite: CHEM 8210.

Physical methods used in inorganic and bioinorganic chemical research including UV/visible/near IR absorption spectroscopy, (magnetic) circular dichroism, electron paramagnetic resonance, nuclear magnetic resonance, Mossbauer and X-ray absorption spectroscopies, single crystal x-ray diffraction, and magnetochemistry. Offered spring semester.

CHEM 8230. Main Group Inorganic Chemistry. 3 hours.

Prerequisite: CHEM 8210.

Descriptive and theoretical aspects of the structure and reactivity of the main group elements. Offered fall semester of even-numbered years.

CHEM 8240. Transition Metal Chemistry. 3 hours.

Prerequisite: CHEM 8210.

Descriptive and theoretical aspects of the structure and reactivity of transition metal compounds, including coordination chemistry and organometallic chemistry. Offered spring semester.

CHEM(BCMB) 8250. Bioinorganic Chemistry. 3 hours.

Prerequisite: CHEM 6400 or BCMB 4010/6010.

Biological processes and molecules, mainly proteins and nucleic acids, which incorporate metal ions. Topics include metal binding to biopolymers, the roles of metal ions in biological processes such as electron transfer, atom or group transfer, and the use of metal complexes as therapeutic agents. Offered fall semester of odd-numbered years.

CHEM 8290. Special Topics in Inorganic Chemistry. 1-4 hours. Repeatable for maximum 15 hours credit.

A selected specialized area of inorganic, organometallic or bioinorganic chemistry. Examples include photochemistry, organometallic chemistry, kinetics and mechanisms, etc. Not offered on a regular basis.

CHEM 8300. Stereochemistry and Conformations. 3 hours.

Structures of organic molecules in terms of molecular orbitals, stereochemistry and conformational analysis. Three dimensional structures, isomeric structures and optical activity. Offered fall semester.

CHEM 8310. Reaction Mechanisms in Organic Chemistry. 3 hours.

Selected organic reactions are discussed in terms of modern electronic structure and bonding theories. Important mechanisms are presented in the context of modern mechanistic theories. Isotope effects and reaction rates. Offered fall semester.

CHEM 8320. Synthetic Organic Chemistry. 3 hours.

Established organic chemistry synthetic procedures as applied in selected important reactions. Synthetic strategies and methodologies and retrosynthetic analysis. Offered spring semester.

CHEM(BCMB) 8330. Molecular Modeling. 3 hours.

Computational studies to calculate the structures of organic molecules. Specific training is given in the application of the molecular mechanics method and the MM-3 software package, ab initio calculations using the Gaussian software package, and other computational schemes. Evaluation of computational results. Not offered on a regular basis.

CHEM 8340. Organic Spectroscopic Analysis. 3 hours.

Ultraviolet, infrared, H- and C- nuclear magnetic resonance and mass spectrometry as tools for the characterization of the structure of organic molecules, with particular emphasis on identifying structures for representative sets of spectra. Offered spring semester.

CHEM 8350. Physical and Biological Organic Chemistry. 3 hours.

Topics at the interface of biological and organic chemistry, with emphasis on physical methods of characterization. Proteins and enzymes, with attention to reaction kinetics, structural characterization, and structure-function relationships. Offered fall semester.

CHEM 8370. NMR Spectroscopy. 3 hours.

The application of nuclear magnetic resonance spectroscopy to the determination of the structure

of organic molecules. Specific training in instrumental operation, studies of various nuclei, measurement of spectra and interpretation of spectra. Not offered on a regular basis.

CHEM 8390. Special Topics in Organic Chemistry. 1-4 hours. Repeatable for maximum 15 hours credit.

Specialized research topics in organic chemistry. Emphasis is given to recent literature descriptions of cutting edge research. Topics include X-ray crystallography, natural products, and heterocyclic chemistry. Not offered on a regular basis.

CHEM(BCMB) 8810. Mass Spectrometry. 3 hours.

Modern methods of mass spectrometry covering fundamental principles, instrumentation, and data interpretation. New techniques for the structural analysis of biomolecules. Offered fall semester.

CHEM 8820. Electrochemistry. 3 hours.

Electrochemistry and electroanalytical chemistry, including the treatment of mass transport, interfacial and coupled chemical processes; the thermodynamics, kinetics and mechanisms of electron transfer processes; and electrochemical methodologies including controlled-potential or controlled-current methods under transient and steady-state conditions. Offered spring semester.

CHEM 8830. Electronics. 4 hours. Three lectures and one 3-hour lab period.

Analog and digital electronic circuit design and construction, as well as the interfacing of computers to laboratory instrumentation. Offered fall semester.

CHEM 8840. Surface and Thin Film Analysis. 3 hours.

Surfaces and thin films, including the construction and use of ultra-high vacuum apparatus. Various microscopy and elemental analysis techniques are investigated, including XRD, SEM, STM, AFM, LEED, Auger spectroscopy, XPS, EPMA and others. Offered spring semester.

CHEM 8850. Analytical Spectrometry. 3 hours.

The instrumentation and methods used for spectrometric measurements throughout the spectrum from gamma-radiation to radio frequencies. Attention is given to the uses, applications, and limitations of all methods studied. Offered spring semester.

CHEM 8860. Advanced Analytical Chemistry. 3 hours.

Selected principles of analytical chemistry such as: techniques of analytical separations, including liquid and gas chromatography and electrophoresis; sampling theory; and chemometrics, including experimental design, statistics and data evaluation. Offered fall semester of even-numbered years.

CHEM 8890. Special Topics in Analytical Chemistry. 1-4 hours. Repeatable for maximum 15 hours credit.

A selected specialized area of analytical chemistry. Emphasis is on current topics in cutting edge research, as presented in recent journal literature. Representative topics include Fourier transform methods, etc.

Not offered on a regular basis.

CHEM 8920. Thermodynamics and Statistical Mechanics. 3 hours.

Classical and statistical thermodynamics applied to chemical reactions, phase equilibria and solutions. The thermodynamic properties of macroscopic matter in terms of the molecular properties. Boltzman, Bose-Einstein and Fermi-Dirac distributions and their applications to physical and chemical systems. Offered fall semester.

CHEM 8930. Introduction to Quantum Chemistry. 3 hours.

The principles of quantum mechanics and their application to chemical systems. The Schrodinger equation and strategies for solving it. Studies of exactly soluble model systems such as the particle in a box, harmonic oscillator, rigid rotor, and the hydrogen atom. Offered fall semester.

CHEM 8940. Chemical Kinetics and Dynamics. 3 hours.

Mechanisms and rates of chemical reactions in the gas phase and in solution. Fast time-resolved experimental techniques to measure reaction rates and reaction intermediates. Photochemical and crossed molecular beam studies of elementary reactions. Energy transfer and state-specific disposal of energy in simple reactions. Unimolecular and bimolecular rate theories. Offered spring semester.

CHEM 8950. Advanced Quantum Chemistry. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: CHEM 8930.

Topics in quantum and computational chemistry including detailed studies of atomic and molecular electronic structure and bonding. Various strategies and methodologies for computations of molecular structure and bonding, including the evaluation of these strategies in the context of experimental data. Offered spring semester.

CHEM 8960. Molecular Spectroscopy. 3 hours. Prerequisite: CHEM 8210 and CHEM 8930.

Optical absorption and emission spectroscopy of diatomic and polyatomic molecules and how the details of spectra can be used to determine molecular structure and intramolecular dynamics. Microwave, infrared, UV- visible, and photoelectron spectroscopy are studied with emphasis on the high resolution measurements possible with laser instruments. Offered spring semester.

CHEM 8990. Special Topics in Physical Chemistry. 1-4 hours. Repeatable for maximum 15 hours credit.

A selected specialized area of physical chemistry or chemical physics. Typical areas include interstellar chemistry, laser technology, ion chemistry, etc. The focus is on current literature and ongoing research in cutting edge areas. Not offered on a regular basis.

CHEM 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CHEM 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Classics

Richard A. LaFleur, *Head*

Naomi J. Norman, *Graduate Coordinator*,
542-2187
(Park Hall)

Graduate work is offered in Greek, Latin, or classics leading to a Master of Arts degree. Requirements for the degree include 28 hours of course work, exclusive of thesis, of which 12 hours must be in the major language (for the degree in Latin or Greek), or 18 hours in Greek and Latin combined (for the classics degree), and the remainder in any of a variety of courses in Greek, Latin, classical civilization, ancient history, archaeology, art, philosophy, linguistics, or other related areas, to be chosen in consultation with the department. All candidates complete a thesis related to their major language and must pass both a reading list exam based on a list of readings in ancient authors and modern criticism and an oral examination on their thesis. All candidates must also demonstrate a reading knowledge of German, French, or Italian.

Master's candidates in classics may

apply for admission to any of the University's doctoral programs in comparative literature, linguistics, art history, or philosophy. The University's College of Education provides courses that may be taken simultaneously with those in classics to obtain teacher certification (in Georgia, Certificates T-5, T-6 and D-7). The MEd, EdS, and PhD degrees in language education/Latin are also available.

Graduate credit is offered for summer semester participation in the Georgia Excavations at Roman Carthage (North Africa) and/or in the University of Georgia Classics Studies Abroad Program in Rome.

Several teaching and non-teaching assistantships are available; application deadline is January 15.

All degrees, except the PhD and MA degrees in Greek and classics, may be earned on a summers-only basis; Latin teachers from out of state are awarded tuition waivers, reducing fees to the in-state level.

Classical Culture

CLAS 4010/6010. Archaic Greece. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1020 or HIST 3250 or HIST 4311/6311 or permission of department.

The expanding world of Greek culture in the period from 750 to 480 BC, including consideration of the many new and influential developments in art, literature, history, political science, and philosophy, and their interrelationships. Not offered on a regular basis.

CLAS 4020/6020. Greek Sanctuaries and Festivals. 3 hours.

Prerequisite: CLAS 1000 or HIST 3250 or HIST 3310 or HIST 4311/6311 or HIST 4312/6312 or permission of department.

The major Greek sanctuaries and their physical remains, and the Greek religious calendar and its important festivals, including the Olympic Games and the Panathanaia. Not offered on a regular basis.

CLAS 4030/6030. The Archaeology of the Greek Colonies. 3 hours.

Prerequisite: CLAS 1000 or HIST 2301 or HIST 3250 or HIST 4311/6311 or HIST 4312/6312 or ARST 2310 or permission of department.

The archaeology of the Greek colonies in Ionia, Magna Graecia, and the Black Sea area is examined to identify and explain the combination of Greek and indigenous cultures in these areas on

the fringes of the Greek world. Not offered on a regular basis.

CLAS 4040/6040. The Hellenistic World. 3 hours.
Prerequisite: CLAS 1000 or HIST 3250 or HIST 4311/6311 or HIST 4321/6321 or HIST 4322/6322 or permission of department.

Archaeology, art, culture, and history of Greece and the East from the rise of Alexander to Rome's annexation of Egypt. Not offered on a regular basis.

CLAS 4100/6100. Ancient Cities of Greece and Rome. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or permission of department.

Selected Greek and Roman cities and their architecture; principles upon which they are planned and laid out. Theories of Hippodamus and others, and the writings of Vitruvius. Detailed study of the topography of Athens and Rome. Course may be taken through UGA Studies Abroad program in Rome. Not offered on a regular basis.

CLAS 4110/6110. The Etruscans and Early Rome. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or permission of department.

The art and culture of the people of Northern Italy known as the Etruscans, with special attention to their relationship with the Greek world and their role in the development of Rome as a city. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

CLAS 4120/6120. Pompeii and Herculaneum: The Buried Cities. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or permission of department.

Pompeii, Herculaneum, and the area destroyed by the eruption of Mt. Vesuvius. Concentration will be on political, social, religious, and economic life, combined with a study of the painting, sculpture, and architecture of the excavated cities and villas. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

CLAS 4130/6130. The Archaeology of Rome's Provinces. 3 hours.

Prerequisite: CLAS 1010 or CLAS(ANTH) 2000 or permission of department.

The archaeology of the Western and/or Eastern provinces of the Roman Empire, concentrating on the major cities and sanctuaries and their physical remains. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

CLAS 4140/6140. Archaeology of Punic and Roman Carthage. 3 hours.

Prerequisite: CLAS 1000 or CLAS(ANTH) 2000 or permission of department.

Corequisite: CLAS 4150/6150.

The civilization of Roman North Africa from the Punic period through the Arab Conquest, using the important city of Carthage as a model. Course may be taken through UGA Studies Abroad program in Carthage. Non- Traditional Format: Open only to students participating in the University's Carthage excavation. Offered summer semester.

CLAS 4150/6150. Practicum in Classical Archaeology. 3 hours.

Prerequisite: CLAS 1010 or CLAS(ANTH) 2000 or permission of department.

Corequisite: CLAS 4140/6140.

All aspects of modern field archaeology on a classical site, including excavation techniques, the keeping of field records, and the classification and conservation of finds from the moment of recovery to their final disposition in museums. Course may be taken through UGA Studies Abroad program in Carthage. Non- Traditional Format: Open only to students participating in the University's Carthage excavation. Offered on a regular basis.

CLAS 4200/6200. Ancient Comedy. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or CLAS 1020 or permission of department.

Ancient comedy in English translation, concentrating on fifth-century Athens, and tracing its changing focus through Menander to Plautus and Terence; also considered will be the theoretical basis of comedy as discussed by Aristotle and others, as well as the place of comedy within the history of genres. Not offered on a regular basis.

CLAS 4210/6210. Ancient Tragedy. 3 hours.

Prerequisite: Permission of department.

The conventions of classical tragedy as exemplified in the plays (in English translation) of the Greek dramatists Aeschylus, Sophocles, and Euripides, as well as the Roman tragedian Seneca. Not offered on a regular basis.

CLAS 4220/6220. Roman Epic Poetry. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or HIST 4322/6322 or permission of department.

The epic poetry of ancient Rome with special emphasis on Ennius, Vergil, and Lucan. The historical background of epic will be examined and the poems will be read in English translation, some attention being given to Renaissance and modern translations. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

CLAS 4230/6230. Classical Rhetoric. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or SPCM 1100.

Classical rhetoric, with special attention to Plato, Aristotle, and Cicero. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

CLAS 4240/6240. Theory and Analysis of Classical Mythology. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or CLAS 1020 or permission of department.

The interpretation and analysis of ancient myths, particularly those of Greece and Rome. Not offered on a regular basis.

CLAS 4300/6300. Selected Topics in Ancient Civilization. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: CLAS 1000 or CLAS 1010 or permission of department.

Special topics in the civilization of Greece and Rome. Topics will vary as demand requires. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

(CLAS)LING 4610/6610. Sanskrit I. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The phonology, morphology, and syntax of the classical Sanskrit language, emphasizing the position of Sanskrit within the Indo-European language family and its importance for Indo-European linguistics. Offered every odd-numbered year on a regular basis.

(CLAS)LING 4620/6620. Sanskrit II. 3 hours.

Prerequisite: LING(CLAS) 4610/6610.

Continued studies in both the synchronic and diachronic grammar of classical Sanskrit. Offered every odd-numbered year on a regular basis.

CLAS 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CLAS 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CLAS 8000. Proseminar in Classics: Bibliography and Methods of Research. 1 hour.

Methods, history, and bibliography in philology and other areas of the classics as a background to graduate study in Greek and/or Latin. Offered fall and summer semesters.

CLAS 8010. Greek Civilization. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Topics in Greek literature or civilization. Course may be taken through UGA Studies Abroad pro-

gram in Classics in Rome. Not offered on a regular basis.

CLAS 8020. Roman Civilization. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Topics in Roman literature or civilization. Course may be taken through UGA Studies Abroad program in Classics in Rome. Not offered on a regular basis.

Greek

GREK 4010/6010. Homer. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selections from the Iliad and/or the Odyssey. Not offered on a regular basis.

GREK 4020/6020. Hesiod. 3 hours.

Prerequisite: GREK 2002 or permission of department.

Study of Hesiod's two surviving poems, the Theogony and the Works and Days, with special attention to the relationship of his language and religious thinking to that of Homer. Not offered on a regular basis.

GREK 4030/6030. Greek Lyric Poets. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selected Greek elegy and lyric, with attention to its political and social background, and to the relation of these literary types to epic and dramatic poetry. Not offered on a regular basis.

GREK 4040/6040. Thucydides. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

The Peloponnesian War through selected readings. Not offered on a regular basis.

GREK 4050/6050. Aeschylus. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Aeschylus' plays, with emphasis on his theology and special uses of the Greek language. Not offered on a regular basis.

GREK 4060/6060. Sophocles. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Sophocles' plays, with emphasis on the poet's religious and humanistic values and his dramatic style.

Not offered on a regular basis.

GREK 4070/6070. Euripides. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Euripides' plays, with emphasis on the poet's dramatic style and his treatment of social, political, and religious themes. Not offered on a regular basis.

GREK 4080/6080. Aristophanes. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selected comedies of Aristophanes. Emphasis is placed on language, style, and thought, and on the generic characteristics of Greek Old Comedy. Not offered on a regular basis.

GREK 4090/6090. Advanced Readings: Plato. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

The dialogues of Plato. Emphasis is placed on the language, style, and philosophical thought of Plato. Not offered on a regular basis.

GREK 4100/6100. Attic Orators. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Orations drawn from the works of Demosthenes, Lysias, and Aeschines, with emphasis on the function and techniques of persuasion in oratory and on the political and social contexts of these orations. Not offered on a regular basis.

GREK 4200/6200. Readings in Selected Greek Authors. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selected Greek authors to be chosen according to the interests of students and instructor. Not offered on a regular basis.

GREK 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GREK 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall and spring semesters.

GREK 8010. Readings and Research in Greek Literature. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Intensive readings and research in Greek literature and pertinent critical readings; the topic examined will be determined by the student's prior training and interests. Offered fall and spring semesters.

Latin

LATN 4010/6010. Roman Rhetoric. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the orations and rhetorical writings of Cicero, Quintilian, Seneca Rhetor, and others. Not offered on a regular basis.

LATN 4020/6020. Roman Epic Poetry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the Latin epic poets Ennius, Vergil, Lucan, and others. Not offered on a regular basis.

LATN 4030/6030. Roman Historians. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from Roman historical writers such as Caesar, Sallust, Ammianus Marcellinus, and others. Not offered on a regular basis.

LATN 4040/6040. Roman Elegy. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the elegiac works of Tibullus/Sulpicia, Propertius, and Ovid, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction. Not offered on a regular basis.

LATN 4050/6050. Roman Epistles. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the letters of Cicero, Seneca, Pliny the Younger, and others. Not offered on a regular basis.

LATN 4060/6060. Roman Satire. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from such satirists as Horace, Juvenal, and others. Not offered on a regular basis.

LATN 4070/6070. Roman Drama. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the comedies of Plautus and Terence, and the tragedies of Seneca, and others. Not offered on a regular basis.

LATN 4080/6080. Roman Didactic Poetry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from Lucretius' *De Rerum Natura*, Vergil's *Georgics*, and others. The poet as teacher; the manner in which poetic form and imagery express philosophy. Not offered on a regular basis.

LATN 4090/6090. Latin of Later Antiquity and the Middle Ages. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from Latin authors of late antiquity and the Middle Ages. Study of Latin vocabulary and style during late antiquity and the Middle Ages. Not offered on a regular basis.

LATN 4100/6100. Roman Biography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from Latin biographical authors such as Nepos, Suetonius, Tacitus, the *Scriptores Historiae Augustae*, and Einhard. Not offered on a regular basis.

LATN 4200/6200. Catullus. 3 hours.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the *Carmina* of Catullus, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction. Not offered on a regular basis.

LATN 4210/6210. Horace. 3 hours.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the works of Horace, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction. Not offered on a regular basis.

LATN 4220/6220. Ovid. 3 hours.

Prerequisite: Undergraduate level only: LATN

3010; Graduate level only: Permission of department.

Readings from the *Metamorphoses* and non-elegiac works of Ovid, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction. Not offered on a regular basis.

LATN 4300/6300. Cicero and the Roman Republic. 3 hours.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the orations and other works of Cicero, and from the works of Caesar, Sallust, and other contemporary writers. Not offered on a regular basis.

LATN 4310/6310. Livy. 3 hours.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the *Ab Urbe Condita* of Livy, with attention to literary and historical issues surrounding the author and his works. Not offered on a regular basis.

LATN 4320/6320. Tacitus. 3 hours.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the *Annales*, *Historiae*, and/or minor works of Tacitus, with attention to literary and historical issues surrounding the author and his works. Not offered on a regular basis.

LATN 4400/6400. Advanced Readings in Latin. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings in one or more Latin authors or genres. Topics to be selected on the basis of student needs. Not offered on a regular basis.

LATN 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

LATN 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

LATN 7770. Latin Teaching Apprenticeship. 2 hours. One lecture and one 1-hour lab period.

Prerequisite: Permission of department.

The teaching of elementary Latin at the college level; an introduction to methods and materials. Observations and practice teaching are required. Offered fall semester.

LATN 8010. Readings and Research in Latin Prose. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Latin prose literature and pertinent critical writings. The topic, author, or genre covered will be determined by the student's previous training and interests. Offered fall and spring semesters.

LATN 8020. Readings and Research in Latin Poetry. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Latin poetic literature and pertinent critical writings. The topic, author, or genre covered will be determined by the student's previous training and interests. Offered fall and spring semesters.

Comparative Literature

Betty Jean Craige, *Acting Head*

James H. McGregor, *Graduate Coordinator*,
542-0420
(Joseph Brown Hall)

Foreign language requirements: MA, fluent reading knowledge of one foreign language and reading competence in a second; PhD, fluent reading knowledge of two foreign languages and reading competence in a third.

MA students are required to take five graduate courses (total 15 hours) in the Department of Comparative Literature and three graduate courses (total 9 hours) in other literature and language departments, for a total of 24 hours. PhD students are required to take six graduate courses (total 18 hours) in the Department of Comparative Literature and three graduate courses (total 9 hours) in other literature and language departments, plus CMLT 9300, for a total of 30 hours beyond the MA.

The department webpage is located at: <http://www.uga.edu/~cml/>.

CMLT 4050/6050. Literature and Ideas of Nature. 3 hours. Repeatable for maximum 6 hours credit.

Literary and philosophical texts of various historical periods that trace changes in how human beings understand their non-human environment. Not offered on a regular basis.

CMLT 4070/6070. Renaissance European Literature. 3 hours.

Literature of Western Europe (Italian, French, Spanish, Germanic, and English) 1450-1600, with emphasis on literary types and prevailing ideas. Not offered on a regular basis.

CMLT 4080/6080. Romantic European Literature. 3 hours.

The rise and development of Romanticism in the eighteenth and nineteenth centuries, with reading of selected literature and criticism. Not offered on a regular basis.

CMLT 4090/6090. Poetry. 3 hours.

Lyric poetry from the mid-nineteenth century to the present. Not offered on a regular basis.

CMLT 4100/6100. Mannerist and Baroque Literature. 3 hours.

Literary forms and issues in Europe ca. 1550-1700, with special attention to the intellectual background and the interrelationships between literature and other arts and sciences. Not offered on a regular basis.

CMLT 4110/6110. Medieval European Literature. 3 hours.

The literatures of medieval Europe with emphasis on major literary genres and the philosophical and social presuppositions which inform them. Not offered on a regular basis.

CMLT 4120/6120. Eighteenth-Century European Literature. 3 hours.

The literature of England, France, and Germany in the eighteenth century, with emphasis on literary types and prevailing ideas. Not offered on a regular basis.

CMLT 4150/6150. The Novel. 3 hours.

The novel as a genre. Origins of prose fiction, theory of the novel, and representative readings of novels from the sixteenth through the twentieth centuries will be included. Not offered on a regular basis.

CMLT 4200/6200. Literature and the Visual Arts. 3 hours.

Formal, philosophical, and thematic relationships between literature and one or more of the visual arts in a given period. Not offered on a regular basis.

CMLT 4210/6210. Literature and Cinema.

3 hours. Repeatable for maximum 6 hours credit. Formal, philosophical, and thematic relationships between literature and cinema. Offered every even-numbered year on a regular basis.

CMLT 4250/6250. Drama. 3 hours.

Drama as a genre from its beginnings to the present. Offered every year on a regular basis.

CMLT 4300/6300. Modernism and Postmodernism. 3 hours.

Modernism and postmodernism as literary movements, with reading of selected literature and criticism. Not offered on a regular basis.

CMLT 4350/6350. Nineteenth-Century Literature. 3 hours.

Readings in major writers and works of nineteenth-century European and world literature. Not offered on a regular basis.

CMLT 4400/6400. East Central European Literature and Culture. 3 hours.

The works of major modern East Central European writers, with some attention to representative cinema. Offered every even-numbered year on a regular basis.

CMLT 4510/6510. Literature and Music. 3 hours.

The forms, relationships, and aesthetics of music and literature. Not offered on a regular basis.

CMLT 4600/6600. Survey of East Asian Literature I. 3 hours.

Poetry, prose, and drama in traditional China and Japan. The works will be in English translation. Offered every year on a regular basis.

CMLT 4610/6610. Survey of East Asian Literature II. 3 hours.

Poetry, prose, and drama in China and Japan from the nineteenth and twentieth centuries. The works will be in English translation. Offered every year on a regular basis.

CMLT 4620/6620. East Asian Novel. 3 hours.

The major/minor novelists and their works, especially those of the nineteenth and twentieth centuries. The novels are in English translation. Offered every year on a regular basis.

(CMLT)LING 4870/6870. Language, Gender, and Culture. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The role of language and culture in the formation of philosophical assumptions about gender differentiation in society. Offered every year on a regular basis.

CMLT 4880/6880. Survey of African Literature I. 3 hours.

African literature from its ancient oral traditions to the European colonial period based on works of African authors written in English and English translations of the African works. Not offered on a regular basis.

CMLT 4890/6890. Survey of African Literature II. 3 hours.

African literature since the independence of the African people from European colonial rule. Not offered on a regular basis.

CMLT 7000. Master's Research. 1-6 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CMLT 7300. Master's Thesis. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CMLT 8020. Seminar in Literary Periods.

3 hours. Repeatable for maximum 15 hours credit.

Specific literary period from an international perspective, with emphasis on theoretical problems in periodization and the relationship of literature to other cultural institutions. Not offered on a regular basis.

CMLT 8030. Seminar in Literary Genres. 3 hours.

Repeatable for maximum 18 hours credit.

Major genre, the epic in the literatures of Europe and America, with particular attention to recent developments in genre theory. Not offered on a regular basis.

CMLT 8040. Problems in Literary Translation.

3 hours. Repeatable for maximum 9 hours credit.

The problems and principles of literary translation, with emphasis on the practice of translation. Not offered on a regular basis.

CMLT 8130. Seminar in Special Topics. 3 hours.

Repeatable for maximum 15 hours credit.

Selected topics in comparative studies, to be determined by the course instructor. Not offered on a regular basis.

CMLT 8280. Problems in the History of Literary Criticism I. 3 hours. Repeatable for maximum 6 hours credit.

Literary criticism from Classical Antiquity through the mid-eighteenth century with attention to the theoretical issues and assumptions underlying the specific critical problems. Not offered on a regular basis.

CMLT 8290. Problems in the History of Literary Criticism II. 3 hours. Repeatable for maximum 6 hours credit.

Literary criticism from the late eighteenth century to the present. Particular attention will be paid to the theoretical issues and assumptions underlying the specific critical problems under investigation. Not offered on a regular basis.

CMLT 8300. Seminar in Contemporary Literary Theory and Criticism. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Literary theory and critical method, as exemplified by diverse figures from a number of differing national and linguistic cultures. Not offered on a regular basis.

CMLT 8310. Seminar in East Central European Studies. 3 hours.

Intellectual trends in their East Central European inflection. The philosophical and ideological underpinnings of the East Central European aesthetic and sociological thought and expression. Not offered on a regular basis.

CMLT 8400. Literature and Science. 3 hours. Repeatable for maximum 6 hours credit.

Models of reality implicit in "scientific" and "literary" texts. Not offered on a regular basis.

CMLT 8500. Literature and Philosophy. 3 hours. Repeatable for maximum 6 hours credit.

The relationships between literature and philosophy, and in the philosophical issues that literature examines. Not offered on a regular basis.

(CMLT)ENGL 8850. Seminar in Criticism and Theory. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. A problem in structuralism, poststructuralism, feminism, psychoanalysis, Marxism, New Historicism, gay and lesbian studies, postmodernism, postcolonialism, or cultural studies; or of a major literary theorist. Not offered on a regular basis.

CMLT 8980. Readings in Comparative Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Independent reading with regular conferences and reports, in some aspects of comparative literature. Not offered on a regular basis.

CMLT 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CMLT 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Japanese

JPNS 4500/6500. Readings in Japanese Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: JPNS 3020.

Selected readings of Japanese literature in the original language. Texts will vary, with focus on readings of works of literature and discussion of issues in literary criticism in Japanese. Not offered on a regular basis.

Computer Science

E. Rodney Canfield, *Head*

John A. Miller, *Graduate Coordinator*,
542-2911

(Boyd Graduate Studies Research Center)

The Computer Science Department offers three distinct graduate programs: Doctor of Philosophy (PhD), Master of Science (MS), and Master of Applied Mathematical Sciences (MAMS). A closely affiliated program is offered by the Artificial Intelligence Center, please see their section in this bulletin. Financial aid possibilities for graduate students include departmental teaching assistantships, departmental research assistantships, and university-wide assistantships.

The PhD degree in computer science is an advanced, intensive program designed to take students to the frontier of knowledge in both the theory and practice of Computer Science. The program prepares students for careers in research (at universities, government, or industrial research labs), teaching at colleges or universities, or advanced development at hardware or software companies. The department presently has active research groups in theory, distributed information systems, image processing, parallel processing, computational science, artificial intelligence, computer architecture, and modeling and simulation. Admission to this program is highly selective: consideration for admission into the PhD program requires a baccalaureate degree or master's degree with a major in computer science or an allied discipline, Graduate Record Examination (GRE) test scores (including the ad-

vanced test in computer science), three letters of recommendation, and a one-page personal statement outlining the applicant's background, achievements, and future goals. Students with an insufficient background in computer science can apply for one of the master's level programs (MS or MAMS).

The MS degree in computer science is a comprehensive program of study intended to give qualified and motivated students a thorough foundation in the theory, methodology, and techniques of computer science. Students who successfully complete this program of study will have a grasp of the principles and foundations of computer science. They will be prepared to pursue higher academic goals, including the PhD degree. They will obtain skills and experience in up-to-date approaches to analysis, design, implementation, validation, and documentation of computer software and hardware. With these skills they will be well qualified for technical, professional, or managerial positions in government, business, industry, and education. Admission to this program is selective: consideration for admission into the MS program requires a baccalaureate degree preferably with a major in computer science or an allied discipline, Graduate Record Examination (GRE) test score, three letters of recommendation, and a one-page personal statement outlining the applicant's background, achievements, and future goals. Though not required for admission, the advanced test in computer science must be taken before completing the MS degree. Students with an insufficient background in computer science must take undergraduate computer science courses in addition to their graduate program to remedy any deficiencies.

The MAMS is a professional master's degree program designed for students who seek a broad training in applied quantitative methods as preparation for professional employment in business, government, or industry. The student takes a core curriculum of courses from four participating departments: Computer Science, Mathematics, and Statistics in the Franklin College of Arts and Sciences; and Management Science in the Terry College of Business. The student may complete a degree with an interdiscipli-

nary program of study which allows combination of expertise in computation with a chosen field of application. The degree is designed to meet the need for technical specialists who can use computation, applied mathematics, operations research, and statistics to solve complex, quantitative, real-world problems. Admission to the MAMS program is selective; applicants must have a baccalaureate degree in a quantitative discipline and have taken introductory courses in computer science, mathematics, and statistics. Applicants must submit the same information as applicants for the MS degree.

Please note that in addition to the requirements of the Department of Computer Science, applicants must satisfy all requirements of the Graduate School as noted in this bulletin.

CSCI 4050/6050. Software Engineering. 4 hours.

Prerequisite: CSCI 2720.

Full cycle of a software system development effort, including requirements definition, system analysis, design, implementation, and testing. Special emphasis is placed on system analysis and design. The design phase includes development of a user interface. A large term project incorporates the full software life cycle. Offered fall semester.

CSCI 4140/6140. Numerical Methods and Computing. 4 hours.

Prerequisite: CSCI 1302 and MATH 2210-2210L.

Prerequisite or corequisite: MATH 3000.

Numerical methods and computing. Topics include: computer arithmetic; numerical solutions of nonlinear equations; polynomial interpolation; numerical differentiation and integration; numerical solutions of systems of linear equations, initial and boundary value problems, systems of ordinary differential equations, spline functions, and the method of least squares. Offered spring semester.

CSCI 4210/6210. Simulation and Modeling. 4 hours.

Prerequisite: CSCI 2720.

The modeling and simulation of existing or planned systems for the purpose of studying their correctness, reliability, or performance. Topics to be addressed include discrete-event simulation, continuous simulation, analysis and modeling methodologies, animation, virtual reality, and Web-based simulation. Offered spring semester.

CSCI 4350/6350. Global Information Systems. 4 hours.

Prerequisite: CSCI 4370/6370 or CSCI 4570/6570.

Provides intermediate to advanced understanding of the use of Internet, World Wide Web, and network computing (including Java) technologies for management (search, access, integration, presentation) of multimedia information. Topics discussed include key techniques, tools and technologies for creating such systems, developing novel applications, and their impact on business. Offered spring semester.

CSCI 4370/6370. Database Management. 4 hours.

Prerequisite: CSCI 2720.

The theory and practice of database management. Topics to be covered include efficient file access techniques, the relational data model as well as other data models, query languages, database design using entity-relationship diagrams and normalization theory, query optimization, and transaction processing. Offered fall and spring semesters.

CSCI 4470/6470. Algorithms. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.

Algorithms, covering basic analysis techniques, basic design techniques (divide-and-conquer, dynamic programming, greedy, and branch-and-bound), basic graph algorithms, and NP-completeness. Offered fall semester.

CSCI 4490/6490. Algorithms for Computational Biology. 4 hours.

Prerequisite: CSCI 4470/6470 or permission of department.

Application of discrete algorithms to computational problems in molecular biology. Topics are drawn from such areas as classical sequence comparison, multiple sequence alignment, DNA sequence assembly, DNA physical mapping, genome rearrangement, evolutionary tree construction, and protein folding. Background in molecular biology is not required. Offered spring semester of odd-numbered years.

CSCI 4500/6500. Programming Languages. 4 hours.

Prerequisite: CSCI 1302.

Prerequisite or corequisite: CSCI 2720.

Several modern programming languages and the paradigm—procedural programming, object-oriented programming, functional programming, and logic programming—that each strives to accommodate. Projects involve at least three languages. Offered spring semester of even-numbered years.

CSCI 4520/6520. Functional Programming. 4 hours.

Prerequisite: CSCI 2720 and CSCI(MATH) 2610.

The functional programming paradigm: functions and types, type inference and polymorphism, higher order functions and recursion, evaluation strategies, abstract data types and modules, lists, trees, and lazy data structures, reasoning about

functional programs. Offered spring semester of even-numbered years.

CSCI(ARTI) 4540/6540. Symbolic Programming. 3 hours.

Prerequisite: CSCI 1302 or permission of department.

Prerequisite or corequisite: CSCI(PHIL) 4550/6550.

Programming in LISP and PROLOG, with emphasis on artificial intelligence techniques. Other languages used for artificial intelligence work will be presented more briefly. Offered fall semester.

CSCI(PHIL) 4550/6550. Artificial Intelligence. 3 hours.

Prerequisite: CSCI 1302 or [PHIL 2500 and (PHIL 3010 or PHIL 3020 or PHIL 3610)] or permission of department. Prerequisite or corequisite: CSCI(ARTI) 4540/6540.

The artificial intelligence approach to modeling cognitive processes. Topics include an introduction to heuristic methods, problem representation and search methods, classic AI techniques, and a review of the controversial issues of the AI paradigm of cognition as computation. Offered fall semester.

CSCI 4570/6570. Compilers. 4 hours.

Prerequisite: CSCI 4720/6720.

Design and implementation of compilers for high-level programming languages. Topics include all phases of a typical compiler, including scanning, parsing, semantic analysis, intermediate code generation, code optimization, and code generation. Students design and develop a compiler for a small programming language. Emphasis is placed on using compiler development tools. Offered fall and spring semesters.

(CSCI)MATH 4630/6630. Mathematical Analysis of Computer Algorithms. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Discrete algorithms (number-theoretic, graph-theoretic, combinatorial, and algebraic) with an emphasis on techniques for their mathematical analysis. Not offered on a regular basis.

(CSCI)MATH 4670/6670. Combinatorics. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Basic counting principles: permutations, combinations, probability, occupancy problems, and binomial coefficients. More sophisticated methods include generating functions, recurrence relations, inclusion/exclusion principle, and the pigeonhole principle. Additional topics include asymptotic enumeration, Polya counting theory, combinatorial designs, coding theory, and combinatorial optimization. Offered every year on a regular basis.

(CSCI)MATH 4690/6690. Graph Theory. 3 hours.
Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Elementary theory of graphs and digraphs. Topics include connectivity, reconstruction, trees, Euler's problem, hamiltonicity, network flows, planarity, node and edge colorings, tournaments, matchings, and extremal graphs. A number of algorithms and applications are included. Offered every year on a regular basis.

CSCI 4720/6720. Computer Architecture and Organization. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.
Structure and function of modern computing systems. Topics studied include combinational and sequential logic, number systems and computer arithmetic, hardware design and organization of CPU, I/O systems and memory systems, instruction set and assembly language design, and current trends and developments in computer architecture and organization. Offered fall and spring semesters.

CSCI 4730/6730. Operating Systems. 4 hours.
Prerequisite: CSCI 4720/6720.

Coverage of the key concepts in modern operating systems. Specific topics include process management, synchronization mechanisms, scheduling strategies, deadlock detection/avoidance, memory management, file systems, protection and security, and distributed systems. Concepts will be reinforced through programming projects using a realistic operating system. Offered fall and spring semesters.

CSCI 4760/6760. Computer Networks: Technology and Applications. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.
In-depth coverage of computer networks, including: digital data transmission and encoding, layered protocol models, Internet protocol, Internet client-server software, and network design methodology. Topics also include discussion of recent network technologies, legal, corporate and public-interest aspects and case studies involving public and private enterprises. Offered spring semester.

CSCI 4810/6810. Computer Graphics. 4 hours.
Prerequisite: CSCI 2720 and CSCI 2670.

Principles of two-dimensional and three-dimensional interactive raster graphics. Principles of scan conversion algorithms for two-dimensional and three-dimensional graphics primitives; data structures and modeling techniques for raster graphics; interaction, visual realism, animation and user interface design; ray tracing, illumination, shading, data storage/retrieval, software engineering and parallel computing for graphics. Offered spring semester.

CSCI 4900/6900. Special Topics in Computer Science. 1-4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Various advanced topics in Computer Science. Not offered on a regular basis.

CSCI 4950/6950. Directed Study in Computer Science. 1-4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Content will vary in response to the interests, needs, and capability of the students and faculty involved. Individual, guided study in computer science. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

CSCI 5080/7080-5080L/7080L. Personal Computer System Administration. 4 hours. Three lectures and two 1-hour lab periods.

Prerequisite: CSCI 1100-1100L.
Management of Windows and Macintosh computer systems. Topics covered include configuration, backups, hardware and software troubleshooting, and setting up for Internet access. Hands-on laboratory emphasized. Offered summer semester.

CSCI 6610. Automata and Formal Languages. 4 hours.

Prerequisite: CSCI 2670.
The fundamental limitations on mechanized computation. In the first part of the course, the emphasis is on possible versus impossible computations. Three classes of languages are considered: regular, context-free, and recursively enumerable. In the second part of the course the emphasis shifts to possible versus feasible computations. Offered spring semester.

CSCI 7000. Master's Research. 1-5 hours. Repeatable for maximum 25 hours credit.

Prerequisite: Permission of department.
Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CSCI 7010. Computer Programming. 4 hours.
Prerequisite: Permission of department.

Algorithms, programs, and computing systems. Topics studied include: fundamental techniques of program development and supportive software tools; and programming projects and applications in a structured computer language. Hands-on experience using microcomputers. Offered spring semester.

CSCI 7100. Technical Report. 1-5 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.
Preparation of a technical report to satisfy requirements for the MAMS degree. Non-Traditional

tional Format: MAMS technical report hours. Offered fall, spring, and summer semesters.

CSCI 7300. Master's Thesis. 1-5 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CSCI 8050. Knowledge-Based Systems. 4 hours.

Prerequisite: CSCI(PHIL) 4550/6550 or CSCI(PHIL) 8650 or permission of department.

Theory and practice of knowledge-based system construction. Topics will include knowledge-based construction, inference engines, reasoning from incomplete or uncertain information, and user interfaces. Offered fall semester.

CSCI 8060. Advanced Software Engineering. 4 hours.

Prerequisite: CSCI 4050/6050 and CSCI 4370/6370.

Analysis of advanced methods in software engineering. Emphasis is placed on formal specification methods, advanced software testing, software reuse, distributed software design, and communication protocol specification. Studies include advanced software development tools and systems. Offered spring semester of even-numbered years.

CSCI 8140. Parallel Processing and Computational Science. 4 hours.

Prerequisite: CSCI 4140/6140 and CSCI 4720/6720.

Topics include computer architectures, interconnection networks, basic concepts in parallel computing, parallel algorithms, matrix multiplications, solving systems of equations, parallel direct and iterative methods, programming on different parallel architectures, and applications. Offered spring semester.

CSCI 8350. Enterprise Integration. 4 hours.

Prerequisite: (CSCI 4370/6370 or CSCI 4570/6570) and permission of department.

Technical information management aspects of enterprise integration using recent advances in workflow management, database management, distributed systems, and information systems areas of computer science. Topics include federated/multidatabase architectures and systems for integration of distributed, heterogeneous, and autonomous databases, business process modeling and workflow automation. Large group project. Offered on a regular basis.

CSCI 8370. Advanced Database Systems. 4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: CSCI 4370/6370 and CSCI 4730/6730.

Advanced study of database systems. The course focuses on concepts, algorithms and technologies for relational, object-oriented and distributed database systems. Related technologies such as data warehouses and repositories will also be covered. Offered spring semester.

CSCI 8470. Advanced Algorithms. 4 hours.

Prerequisite: CSCI 4470/6470 and CSCI 6610.

Further study of fundamental algorithms. Topics covered include advanced data structures, graph algorithms, string algorithms, geometric algorithms, parallel algorithms, and approximation algorithms for NP-complete problems. Offered spring semester.

CSCI(LING) 8570. Natural Language Processing Techniques. 4 hours.

Prerequisite: CSCI(ARTI) 4540/6540 and LING 8150.

Human language from a computational point of view; algorithms and techniques for computer understanding of human-language input. Offered fall semester.

CSCI 8610. Topics in Theoretical Computer Science. 4 hours. Repeatable for maximum 1 hours credit.

Prerequisite: CSCI 4470/6470 and CSCI 6610.

Advanced topics in theoretical computer science. The selection of topics varies from year to year. Areas may include, but are not limited to, denotational semantics, complexity theory, recursive theory, and discrete algorithms. Offered fall semester of odd-numbered years.

CSCI(PHIL) 8650. Logic and Logic Programming. 4 hours.

Prerequisite: [CSCI(ARTI) 4540/6540 and PH(LING) 6430] or permission of department.

Theoretical foundations of automated reasoning and logic programming. Topics covered include propositional logic, predicate logic, first-order models, resolution principles, logic programming paradigms, nonmonotonic reasoning. Offered spring semester of even-numbered years.

CSCI 8720. Advanced Computer Architecture. 4 hours.

Prerequisite: CSCI 4730/6730 or permission of department.

Advanced and high-performance computer architecture. Topics covered include hierarchical memory design, cache memory design, pipeline vector processing and parallel processing. Case studies of vector processors and multi-processor architectures: shared memory, distributed memory, data parallel (SIMD) and control parallel (MIMD) architectures, and heterogeneous parallel computing on a network of workstations. Offered fall semester.

CSCI 8730. Software Systems for Parallel and Distributed Computing. 4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: CSCI 4730/6730.

Software systems geared at supporting parallel and distributed computing. Programming language support will focus on simple and efficient ways to express parallel programs. Compiler and operating system support will focus on new optimizations to make parallel programs execute more efficiently. Offered spring semester.

CSCI 8750. Principles of VLSI Systems Design. 4 hours.

Prerequisite: CSCI 4370/6370 and CSCI 4720/6720.

Methods and computer tools used in the design of integrated electronics devices: layout, simulate, verify, and performance. Students will do a project design. Offered fall semester.

CSCI 8770. Computer-Aided Design. 4 hours.

Prerequisite: CSCI 8750.

Computer-aided design systems, with emphasis on designer-system interaction. Algorithms and systems for synthesis, analysis, optimization by criteria, simulation, and testing. Offered spring semester.

CSCI 8810. Image Processing and Computer Graphics. 4 hours.

Prerequisite: CSCI 4810/6810 or permission of department.

Image processing and computer graphics. Topics include: image representation, restoration, transformation, classification, compression, enhancement, segmentation, image filter, design, histogram techniques, sampling and quantization, Fast Fourier Transform, image data structures, parallel/distributed processing, illumination models and surface-rendering methods. A number of applications will be presented as case studies. Offered fall semester.

CSCI 8820. Computer Vision and Pattern Recognition. 4 hours.

Prerequisite: CSCI 4810/6810 or permission of department.

Low-level and high-level vision including edge detection, connected component labeling, boundary detection, segmentation, stereopsis, motion analysis, and object recognition. Knowledge representation, knowledge retrieval and reasoning techniques in computer vision. Parallel computing, parallel architectures and neural computing or computer vision. Offered spring semester.

CSCI(ENGR) 8940. Computational Intelligence. 4 hours.

Prerequisite: CSCI(PHIL) 4550/6550 or permission of department.

Programs that solve complex problems in a particular domain, typically independent of knowledge used to direct the search for an optimal

solution. Approaches include simulated annealing, genetic algorithms, neural networks. Offered spring semester.

CSCI 8990. Research Seminar. 1 hour.

Prerequisite: Permission of department.

Weekly research seminar. Students must attend and give at least one presentation at the seminar. Offered fall, spring, and summer semesters.

CSCI 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CSCI 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Drama and Theatre

Farley Richmond, *Head*

Franklin J. Hildy, *Graduate Coordinator*,
542-2836

(Fine Arts Building)

Graduate work in drama and theatre is offered in the areas of history and theory of theatre and the dramatic arts for the PhD degree and in the creative and technical aspects of stage, film, TV, and digital media for the MFA degree. Facilities include four theatres, video production and editing areas, and an exceptional computer animation/CAD laboratory. Extensive library facilities and cooperative research arrangements with cognate departments are available.

Prospective students who desire financial aid should complete their application with the Department of Drama and Theatre before February 15.

DRAM 4000/6000. Dramatic Writing I. 3 hours.

Prerequisite: DRAM 3020.

Planning, writing, and polishing the short script for performance. Offered spring semester.

DRAM 4250/6250. History of Cinema I. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: DRAM 2120 and junior or senior standing.

The development of the international film and of film theories from 1895 to 1945, with emphasis on cinema as a dramatic medium. Offered fall semester.

DRAM 4260/6260. History of Cinema II. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: DRAM 2120 and junior or senior standing.

The development of international film and film theories from 1945 to the present, with emphasis on cinema as a dramatic medium. Offered spring semester.

(DRAM)TXMI 4270/6270. History of Costume: Antiquity to Nineteenth Century. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Interrelationships of costume and social, cultural, political, and economic environments from antiquity to the nineteenth century. Offered fall semester of odd-numbered years.

DRAM 4280/6280. Women in Performance. 3 hours.

Women's contributions to the performing arts, focusing on contemporary American artists in such fields as theatre, film, dance, performance art, and other contemporary performance genres. Offered spring semester of odd-numbered years.

DRAM 4330/6330. Shakespeare. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 3500 or permission of department.

Performance of Shakespeare's plays. Offered spring semester of even-numbered years.

DRAM 4400/6400. Asian Theatre and Drama. 3 hours.

Genres of performance in India, China, Japan, and Southeast Asia. Focus on social and cultural significance of performances, including examples of Noh, Kabuki, Beijing Opera, Kathakali, Kutiyattam, Wayang Kulit, and Topeng. Not offered on a regular basis.

DRAM 4480/6480. History of African American Drama and Theatre. 3 hours.

The emergence of a distinct and conscious African American theatre in the United States. Offered spring semester of even-numbered years.

(DRAM)AFAM 4490/6490. African American Women in Cinema: Image and Aesthetics. 3 hours.

Prerequisite: Permission of department.

Selected films by and about African and African American women. A historical/critical overview of the presentation of these women in cinema with emphasis on contemporary African and African

American women film makers. Not offered on a regular basis.

DRAM 4800/6800. Topics in History. 3 hours. Repeatable for maximum 6 hours credit.

Topical issues in theatre or cinema, combining history and critical analysis of specific significant topics (e.g., national theatre or cinema, animation, authorship, genre). Offered fall and spring semesters.

DRAM 5310/7310. Technical Problems. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: DRAM 3340.

Special topics in advanced theory and techniques of performance technology, including scenery construction and rigging, costume construction, lighting technology, and sound. Offered spring semester.

DRAM 5320/7320. Computer-Aided Design for the Performance Arts. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods. Prerequisite: DRAM 3300 and permission of department.

Techniques of computer-aided design and drafting in the performing arts. Offered fall semester.

DRAM 5340/7340. History of Costume and Decor. 3 hours.

Prerequisite: DRAM 3300.

The styles of costuming, architecture, furnishing, and ornamentation in significant theatrical periods. Offered fall semester.

DRAM 5351/7351. Design for the Performance Arts I. 3 hours. Three 3-hour lab periods.

Prerequisite: DRAM 3300.

Design for the performing arts (scenery, costume, lighting), emphasizing conceptualization and application for basic research and technology to meet dramatic needs. Offered fall semester.

DRAM 5352/7352. Design for the Performance Arts II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5351/7351.

Design for the performing arts (scenery, costume, lighting, sound) emphasizing conceptualization and application using current and advanced methods and technology. Offered spring semester.

DRAM 5380/7380. Design Technology for the Performance Arts. 3 hours.

Prerequisite: DRAM 3300.

Basic technology for performance production. Costume materials and construction, scenery rigging and movement, lighting equipment and technology, and sound equipment and practices. Offered spring semester of odd-numbered years.

DRAM 5610/7610. Play Direction Laboratory. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5600.

The director's analysis of the script, the actor-director relationship, and theatrical style. Each stu-

dent directs a one-act play or short film. Offered spring semester.

DRAM 5620/7620. Dramatic Writing II. 3 hours.

Prerequisite: DRAM 4000/6000.

Developing the full length script for performance. Offered fall semester of even-numbered years.

DRAM 5630/7630. Producing the New Script. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Critical and practical work in producing new scripts for writers, actors, directors, and designers. Offered fall semester of odd-numbered years.

DRAM 5640/7640. Directing for the Cinema. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5600 or permission of department.

Theories and techniques of the dramatic cinema. Offered fall semester.

DRAM 5751/7751. Design for the Performance Arts III. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5352/7352.

Projects in design (scenery, costume, lighting), with an emphasis on multi-character, multi-setting design and highly complex designs using traditional methods and technologies.

Offered fall semester.

DRAM 5752/7752. Design for the Performance Arts IV. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5751/7751.

Projects in design (scenery, costume, lighting, sound) with an emphasis on multi-character, multi-setting and highly complex designs using current and advanced methods and technologies. Offered spring semester.

DRAM 5810/7810. Computer Animation for Dramatic Media I. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 3300 and permission of department.

Computer animation in television, film, and theatre from the perspective of the director/animator. The hardware and software necessary to create computer animation is accompanied by the principles of kinetics and narrative story-telling in a visual medium. Offered fall and spring semesters.

DRAM 5820/7820. Computer Animation for Dramatic Media II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5810/7810 or permission of department.

Advanced computer animation techniques and digital compositing which integrate live action with computer generated environments. Offered spring semester.

DRAM 5830/7830. Computer Animation for Dramatic Media III. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5820/7820 or permission of department.

Preparation of a portfolio-quality computer animation project, including a narrative script story book, pre-production meetings, schedules and budgets, production and post-production. Offered fall semester of odd-numbered years.

DRAM 5860/7860. Interactive Multimedia as a Dramatic Medium. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Practice and theory of interactive multimedia as a dramatic medium. Multimedia hardware and software, principles of interactive design, and comparison of development tools and delivery systems including CD-ROM and the World Wide Web. Offered fall semester of even-numbered years.

DRAM 5870/7870. Interactive Multimedia and Live Performance. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

The use of computers to trigger and manipulate media events, including sound, lighting, digital images and video, and techniques allowing performers and spectators to interact with such media events in real time. Topics include sensors, motion capture, MIDI, and theoretical issues concerning the interaction between live performance and media. Offered on a regular basis.

DRAM 6100. Introduction to Critical Methods. 3 hours.

The nature of rigorous scholarship in the dramatic arts and the variety of current critical perspectives and methods. Not offered on a regular basis.

DRAM 6200. Theatre History I. 3 hours.

Historiography, criticism, and theory of theatre from its beginnings to ca. 1800. Offered on a regular basis.

DRAM 6210. Theatre History II. 3 hours.

Historiography, criticism, and theory of theatre from ca. 1800 to the present. Offered spring semester.

DRAM 6290. Dramatic Analysis and Criticism. 3 hours.

Dramatic art applied to script analysis and performance criticism. Offered spring semester.

DRAM 6510. Introduction to Graduate Studies in Drama. 1 hour.

Prerequisite: Permission of department.

Resources and methods for graduate level research in theatre and dramatic media. Offered fall semester.

DRAM 7050. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.

Individually assigned production and/or performance crew. Open only to drama majors. Offered fall and spring semesters.

DRAM 7060. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.

Individually assigned production and/or performance crew. Open only to drama majors. Offered fall and spring semesters.

DRAM 7070. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.

Individually assigned production and/or performance crew. Open only to drama majors. Offered fall and spring semesters.

DRAM 7210. MFA Project. 3 hours.

MFA thesis project.

Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

DRAM 7370. Design Studio. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Methods of rendering designs, painting scenery, creating working drawings and models of scenery, costumes and lights for stage, film, and television. Offered fall and spring semesters.

DRAM 7511. Actor Training I: The Physical Actor I. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Physical techniques for the actor. Offered fall semester of even-numbered years.

DRAM 7512. Actor Training I: The Physical Actor II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 7511 and permission of department.

Physical techniques for the actor in dealing with the differing demands of stage, film, and electronic media. Offered spring semester of even-numbered years.

DRAM 7521. Actor Training II: Voice for the Actor I. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Voice techniques for the actor. Offered fall semester of odd-numbered years.

DRAM 7522. Actor Training II: Voice for the Actor II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 7521 and permission of department.

Voice techniques for the actor in relation to the needs of stage, film, and electronic media. Offered spring semester of odd-numbered years.

DRAM 7540. Characterization for the Actor. 3 hours. Three 2-hour lab periods.

Prerequisite: (DRAM 7512 or DRAM 7521) and permission of department.

Role analysis and the problems and techniques of creating subtext with special relation to text and improvisation. Offered fall semester of odd-numbered years.

DRAM 7550. Acting in Period Styles. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 7522 and permission of department.

Problems and techniques of acting in periods and styles through intensive scene study and performance.

Offered spring semester of odd-numbered years.

DRAM 7560. Projects in Drama. 3 hours. Repeatable for maximum 6 hours credit. One 3-hour lab period.

Prerequisite: Permission of department.

Advanced projects in dramatic performance. Offered fall, spring, and summer semesters.

DRAM 7570. Acting for the Camera. 3 hours. Three 2-hour lab periods.

Prerequisite: (DRAM 7522 or DRAM 7540) and permission of department.

Applying theatre acting techniques to the demands of modern media. Practical work in class with emphasis on the vocal and physical demands of dramatic material designed for television and cinema. Offered fall semester of odd-numbered years.

DRAM 7580. Performance Topics. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Selected performance topics and theories. Offered fall semester of odd-numbered years.

DRAM 7590. Realism in Performance. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Performance techniques and challenges in realistic drama. Offered spring semester of odd-numbered years.

DRAM 7951. Design for the Performance Arts V. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Projects in total design (scenery, costume, lighting), with an emphasis on the most complex design and technology utilized in a variety of contexts. Offered fall semester.

DRAM 7952. Design for the Performance Arts VI. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 7951.

Projects in design (scenery, costume, lighting, sound), with an emphasis on current, advanced, and complex methods and technologies. Offered spring semester.

DRAM 7970. Design Portfolio. 3 hours. One 3-hour lab period.

Prerequisite: DRAM 7952.

Independent projects in scenery, costume, or lighting design, aimed at fully developing a presentation portfolio.

Not offered on a regular basis.

DRAM 8030. Seminar in Dramatic Writing. 3 hours. Repeatable for maximum 6 hours credit. Prerequisite: Permission of department. Dramatic form and style concentrating on specific problems and writers. Offered fall semester of even-numbered years.

DRAM 8200. Seminar in History of the Performance Arts. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Problems in the study of stage, cinema, and media history. Offered spring semester of even-numbered years.

DRAM 8300. Seminar in Design for the Performance Arts. 3 hours. Repeatable for maximum 6 hours credit. Prerequisite: Permission of department. Problems in visual design for the performing arts. Offered spring semester.

DRAM 8400. Seminar in Dramatic Theory and Criticism. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Problems in the study of dramatic theory and criticism for stage, cinema, and media. Offered fall semester.

DRAM 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Research while enrolled for a doctoral degree, under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

DRAM 9010. Research Seminar and Special Problems in the Performance Arts I. 3-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Individually directed study under faculty supervision on research problems in drama, theatre, and media. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

DRAM 9020. Research Seminar and Special Problems in the Performance Arts II. 1-3 hours. Repeatable for maximum 6 hours credit. Prerequisite: Permission of department. Individually directed study under faculty supervision on research problems in drama, theatre, and media. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

DRAM 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral

dissertation. Offered fall, spring, and summer semesters.

Ecology

C. Ronald Carroll, *Director*
William K. Fitt, *Graduate Coordinator*,
542-3404
(Ecology Building)

For more than thirty years, the Institute of Ecology has been a center for interdisciplinary team research which deals holistically with humans and the environment. Recently the School of Ecology was formed, and all degrees are now offered through this academic unit.

The Ecology PhD degree allows students to develop a broad background in ecology and related disciplines. All requirements for admission are the same as for the Graduate School with the exception of the GRE score. The minimum required GRE score for admission for the Ecology PhD degree is 1100. As part of the curriculum, students must take Ecology 8000, Topics in Modern Ecology, but the remainder of the program of study is designed to fit the individual needs of the student. Facilities of the Institute of Ecology, and at off-campus facilities such as the Savannah River Ecology Laboratory, the Joseph Jones Ecological Research Center, the Coweeta Hydrologic Laboratory, the University of Georgia Marine Institute, and elsewhere, provide students unusual opportunities for ecological training. The program has attracted outstanding students and produced exceptionally talented ecological scientists, many of whom are now leaders in the field.

A MS degree program in Ecology was recently approved by the Board of Regents. It is focused on training in the natural environment, as well as the integration of natural and socio-economic systems. Students address specially selected research topics which are amenable to a two-year training activity. These topics require that they learn research design and encourage the use of special skills, monitoring techniques, analysis, and interpretation of ecological/environmental data. Graduate students set their

results into the context of ecological and human ecology.

Another degree offered is the MS in Conservation Ecology and Sustainable Development. This is an integrative training program which provides field experience and teaches skills and conceptual approaches that are essential to successful efforts in conservation and environmentally sustainable development. The principal components of the training program include: core courses to provide breadth in conceptual approaches; program flexibility to allow students the opportunity to emphasize social-economic aspects or natural science aspects without sacrificing either; active involvement in a seminar series that stresses multi-disciplinary efforts and collaboration on projects; and opportunities for field experience in addressing environmental problems. We expect that graduates of this program will be competitive for mid-level management positions in public and private stewardship organizations such as the National Park Service or the Nature Conservancy. The master's degree option also provides a sound interdisciplinary base for pursuing a more specialized doctoral program.

A certificate in Conservation Ecology and Sustainable Development is also offered. Students enrolled in other graduate programs at the University of Georgia are eligible to apply. This option is designed to meet the needs of professionals in such fields as law, forestry, and engineering who may wish to develop an environmental specialization in their professional field. This option includes the coursework that is available in the master's degree program but does not require fieldwork or research.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

ECOL 4000/6000-4000L/6000L. Organismal, Population, and Community Ecology. 4 hours. Three lectures and one 3-hour lab period. Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210-2210L.

The evolution, physiology, and diversity of organisms; the birth, death, and movement of organisms, with particular reference to population dynamics; the forces that structure communities of plants and animals. Offered fall semester.

ECOL 4010/6010-4010L/6010L. Ecosystem Ecology. 4 hours. Two lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210-2210L and STAT 4210 and senior standing.

Ecosystem structure and function with emphasis on energetic and biogeochemical processes in natural and managed ecosystems. Methodology of ecosystem analysis, including field, laboratory, and computer techniques. Non-Traditional Format: Weekend field trips. Offered spring semester.

ECOL 4020/6020-4020L/6020L. Field Systems Ecology. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210-2210L.

Ecology, field biology, and dynamic processes of terrestrial and aquatic ecosystems integrated by empirical monitoring and systems modeling within a campus watershed. Field trips to the Smoky Mountains and Georgia coast will extend the principles to a regional geographic scale. Non-Traditional Format: The projects will be conducted on an unscheduled basis, requiring open access to laboratory and computer facilities. Offered fall semester of even-numbered years.

ECOL 4030/6030-4030L/6030L. Mammalogy.

4 hours. Two lectures and two 3-hour lab periods. Prerequisite: ECOL(FORS) 3260-3260L or permission of department.

Taxonomy, distribution, ecology, and evolution of mammals. Offered fall semester.

ECOL 4040/6040-4040L/6040L. Herpetology.

4 hours. Two lectures and two 2-hour lab periods. Prerequisite: BIOL 1108-1108L.

Evolution, ecology, behavior, structure, and physiology of amphibians and reptiles. Offered spring semester.

ECOL 4050/6050-4050L/6050L. Ichthyology.

4 hours. Three lectures and one 3-hour lab period. Prerequisite: ECOL(FORS) 3260-3260L.

Taxonomy, distribution, ecology, evolution, and conservation of the marine and freshwater fishes of eastern North America. Offered spring semester.

ECOL 4060/6060-4060L/6060L. Ornithology.

3 hours. Two lectures and one 3-hour lab period. Prerequisite: BIOL 1108-1108L.

Identification, classification, life histories, evolution, and behavior of birds, with an emphasis on Georgia species. Offered spring semester of even-numbered years.

ECOL 4070/6070-4070L/6070L. Invertebrate Zoology.

4 hours. Three lectures and two 3-hour lab periods.

Prerequisite: BIOL 1108-1108L.

Functional morphology, taxonomy, phylogeny, and general biology of invertebrates. Offered fall semester.

ECOL 4110/6110. Insect Diversity. 4 hours. One lecture and three 2-hour lab periods.

Prerequisite: Permission of department.

The biodiversity of tropical and temperate insects, including theoretical issues, natural history, and methods for study. Offered fall semester of even-numbered years.

(ECOL)ANTH 4210/6210. Zooarchaeology. 3 hours.

Prerequisite: ANTH 1102 or BIOL 1104-1104L or BIOL 1108-1108L or permission of major.

Animal remains recovered from archaeological sites, studied in light of zoological and archaeological methods and theories and interpreted in terms of human and animal behavior. Not offered on a regular basis.

ECOL 4240/6240-4240L/6240L. Physiological Ecology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: BIOL 1108-1108L.

Physiological responses of organisms to environmental factors. Not offered on a regular basis.

(ECOL)ANTH 4290/6290. Environmental Archaeology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of major.

Prehistoric and historic human subsistence patterns through the methods and techniques of zooarchaeology, paleobotany, and paleonutrition. Theories of environmental reconstruction. Not offered on a regular basis.

ECOL(FORS) 4310/6310-4310L/6310L. Limnology. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or FORS 3300.

Aquatic ecosystems (lakes and streams) and their biota. Linkages between terrestrial and aquatic ecosystems. Offered fall semester.

ECOL 6080. Principles of Conservation Ecology and Sustainable Development I. 4 hours. Three lectures and one 1-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or permission of department.

Ecological principles applied to conservation of habitats and biodiversity. Influence of human activity on population dynamics, genetics, and community structure. Offered fall semester.

ECOL(ANTH)(FORS) 6140. Principles of Conservation Ecology and Sustainable Development II. 3 hours.

Prerequisite: ECOL 6080.

Social science dimensions of conservation and sustainable development; social, economic, and political considerations in managing natural re-

sources; policy-level aspects to project implementation. Offered spring semester.

ECOL(EETH) 6200-6200L. Ecological Concepts. 4 hours. Three lectures and one 3-hour lab period.

Ecological science for non-biology majors, using a hierarchical perspective from the global system to the ecology of the individual. Offered spring semester.

ECOL(CRSS) 6650-6650L. Soil Biology and Ecology. 4 hours. Two lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or CRSS 4590/6590-4590L/6590L or CRSS(MIBO) 4610/6610-4610L/6610L.

Organisms in the soil environment, with emphasis on macrobiota and their functional roles in food webs and ecosystem processes. Offered fall semester of even-numbered years.

ECOL 7000. Master's Research. 1-15 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ECOL 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ECOL 8000. Topics in Modern Ecology. 3 hours.

Prerequisite: Permission of department.

Research topics in modern ecology presented by faculty of ecology, with emphasis on research grants and proposal writing. Offered fall semester.

ECOL(ANTH) 8110. Tropical Ecological and Cultural Systems. 2 hours.

Prerequisite: ECOL(FORS)(ANTH) 6140.

Characteristics of tropical ecosystems, tropical biological communities, and human cultures in the tropics; how they differ from those in the temperate zone, and the implications for conservation and development. Offered spring semester of even-numbered years.

ECOL(BTNY) 8120-8120L. Plant Reproductive Ecology. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: Permission of department.

Pollination ecology, breeding systems, patterns of gene flow via pollen and seed dispersal, flower arrangement and phenology, and implications of reproductive biology for demography. Group and individual laboratory projects. Not offered on a regular basis.

ECOL 8150-8150L. Wetland Ecology. 4 hours. Three lectures and one 3-hour lab period. Prerequisite: Permission of department. Ecology, elemental cycling, hydrology, policy, and management of wetlands. Techniques for studies of wetlands. Both marine and freshwater wetlands will be included. Not offered on a regular basis.

ECOL 8170. Natural History of the Hymenoptera. 4 hours. One lecture and three 2-hour lab periods.

Prerequisite: Permission of department. Natural history of the Hymenoptera, including evolution, ecology, and systematics. Identification of taxa of Hymenoptera and methods used in their study. Offered fall semester of odd-numbered years.

ECOL 8220. Stream Ecology. 2 hours. Repeatable for maximum 8 hours credit. One 2-hour lab period.

Prerequisite: Permission of department. Current topics and literature from the standpoints of objectives, experimental design, data analyses, results, assessment of results, and significance to general stream ecology. Offered spring semester.

ECOL 8230. Lake Ecology. 2 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department. Current topics and literature in the ecology of lakes, ponds, reservoirs, and wetlands. Offered spring semester.

ECOL 8300. Behavioral Ecology. 3 hours.

Prerequisite: Permission of department. Ecological variation, natural selection, and other evolutionary processes; sexual selection and sexual conflict, mating systems, sex allocation, the causes and consequences of sexual behavior, evolution of sex, parental care, cooperation, competition, and punishment. Offered fall semester of even-numbered years.

ECOL(BTNY)(FORS) 8310. Population Ecology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and permission of department.

Advanced ecological theory to biological populations. Mathematical and evolutionary treatment of population growth and regulation, niche theory, foraging theory, predator-prey theory, habitat selection, and competition. Offered fall semester.

ECOL 8400. Perspectives on Conservation Ecology and Sustainable Development. 1 hour.

Ecological issues of conservation and development. Offered every year on a regular basis.

(ECOL)BTNY 8410. Community Ecology. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: ECOL 4010/6010-4010L/6010L and STAT 4220.

The applicability of advanced theory to multi-species communities. Patterns and processes that influence species composition, diversity, and function. Topics include deterministic vs. stochastic regulation, succession, resource partitioning, patch dynamics, island biogeography, and food webs. Offered spring semester.

ECOL 8420. Watershed Conservation. 2 hours. Prerequisite: BIOL 1108-1108L and permission of department.

Environmental problems in freshwater systems over a variety of scales (local to global) from a conservation perspective. Systems examined include streams, rivers, lakes, wetlands, groundwater and coastal waters, with a strong focus on effective incorporation of ecological knowledge into resource management efforts. Offered fall semester.

ECOL 8440. Principles of Agroforestry/Agroecology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or ECOL 4010/6010-4010L/6010L or permission of department.

Agricultural intercropping, mixed forestry plantation practices, and sustainable resource use. Offered fall semester of even-numbered years.

ECOL 8500. Theoretical Ecology. 2 hours. Repeatable for maximum 8 hours credit. One 2-hour lab period.

Theoretical literature in population, community, and ecosystem ecology. Not offered on a regular basis.

ECOL 8580-8580L. Theory of Systems Ecology. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: Permission of department. Theory of complex systems applied to ecology and ecosystems. Team projects will be conducted in ecological modeling and systems analysis. Non-Traditional Format: Team projects will be conducted on an unscheduled basis, requiring open access to laboratory and computer facilities. Offered fall semester of odd-numbered years.

ECOL 8600. Nuclear Tracers in Ecology. 3 hours. Two lectures and one 3-hour lab period.

The use of stable and radioactive tracers in ecological research. Current use of nuclear tracers for carbon, nitrogen, phosphorus, and sulfur in soil, water, and terrestrial ecosystems. Not offered on a regular basis.

(ECOL)EHSC 8610. Aquatic Toxicology. 3 hours.
Prerequisite: CHEM 2211 and CHEM 2211L and [EHSC 4490/6490 or PHRM(VPHY) 6910 or PHRM(VPHY)(POUL)(EHSC) 8920].

Toxicological effects of aquatic pollution focusing on fate and transport of xenobiotics; xenobiotic accumulation, dynamics, and toxicity in aquatic organisms; the analysis and modeling of the effects of aquatic pollution on organisms; and the determination of related risks to aquatic ecosystems and human populations. Offered fall semester.

ECOL(EHSC) 8630-8630L. Quantitative Ecological Toxicology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and (STAT 4220 or STAT 6220).

Principles and quantitative methods for the analysis of ecotoxicological data. Offered fall semester of even-numbered years.

(ECOL)CRSS 8650. Nutrient Cycling Models. 3 hours.

Prerequisite: [CSCI 7010 and CRSS(MIBO) 4610/6610-4610L/6610L] or permission of department.

Structure, function, and performance of current nutrient cycling models used to simulate carbon, nitrogen, phosphorus, and sulfur transformations in the soil. Offered on a regular basis.

ECOL(AAEC) 8700. Environmental Policy and Management. 3 hours.

Evolution, form, and substance of United States federal policies and programs that address ecological problems, focusing on the nature of problems and alternatives for effective resolution. Offered fall semester.

ECOL 8990. Problems in Ecology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Analysis of contemporary themes in ecology. Non-Traditional Format: Variable hours established by instructor.

Offered fall, spring, and summer semesters.

ECOL 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ECOL 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

English

Anne Williams, *Head*

Nelson Hilton, *Graduate Coordinator, 542-2197*
(Park Hall)

For further information regarding courses, faculty, students, admissions, language, and other requirements for the MA, MAT, and PhD degrees, as well as our annual report, handbook, and initiatives in humanities computing, rhetoric and composition, and more, please visit our web site.

The English department also participates in MA and PhD programs in linguistics. Further information for these programs appears separately under Linguistics.

E-mail address for: Graduate Coordinator: gradco@english.uga.edu; web site: www.english.uga.edu/grad.

ENGL(LING) 4000/6000. History of the English Language. 3 hours.

Prerequisite: Permission of department.

The development of present English through the stages of Old English, Middle English, and early Modern English. Study of elementary phonetics, phonemics, sound change, and dialect variation. Offered spring semester.

ENGL(LING) 4010/6010. American English. 3 hours.

Prerequisite: Permission of department.

The history, present status, and future prospects of American English, including standards and internal variation. Not offered on a regular basis.

ENGL(LING) 4060/6060. Old English. 3 hours.

Prerequisite: Permission of department.

The language and literature of England before the Norman Conquest, with reading of selected texts. Offered fall semester.

ENGL(LING) 4110/6110. English Grammar. 3 hours.

Prerequisite: Permission of department.

English grammar in the scholarly tradition of Curme and Jespersen. Offered spring semester.

ENGL(LING) 4170/6170. Second Language Acquisition. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Linguistic theories of second language acquisition, with emphasis on the acquisition of English. Topics include order of acquisition, sociocultural factors with linguistic bases, and neurolinguistic models. Not offered on a regular basis.

ENGL(LING) 4180/6180. ESL Error Analysis. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Psycholinguistic theory applied to problems in second language learning, and the prediction of language behavior through the use of contrastive analysis. Not offered on a regular basis.

ENGL 4210/6210. Old English Literature. 3 hours.

Prerequisite: ENGL(LING) 4060/6060 or permission of department.

Prose and poetry of the Old English period, exclusive of Beowulf, with emphasis on poetry. Works will be read in Old English, with supplementary translations. Offered spring semester of even-numbered years.

ENGL 4220/6220. Beowulf. 3 hours.

Prerequisite: ENGL(LING) 4060/6060 or permission of department.

The poem in the original Old English, with attention to important critical studies. Offered fall semester of even-numbered years.

ENGL 4240/6240. Chaucer. 3 hours.

Prerequisite: Permission of department.

Canterbury Tales, Troilus and Criseyde, and minor poems. Offered spring semester.

ENGL 4300/6300. Elizabethan Poetry. 3 hours.

Prerequisite: Permission of department.

Poetry of the earlier English Renaissance, such as works by Wyatt, Surrey, Sidney, Spenser, and Marlowe, and the sonnets of Shakespeare. Offered fall semester of even-numbered years.

ENGL 4320/6320. Shakespeare: Part I. 3 hours.

Prerequisite: Permission of department.

The early plays of Shakespeare. Offered fall semester.

ENGL 4330/6330. Shakespeare: Part II. 3 hours.

Prerequisite: Permission of department.

The later plays of Shakespeare. Offered spring semester.

ENGL 4340/6340. Renaissance Drama. 3 hours.

Prerequisite: Permission of department.

English drama from 1576 to 1642, exclusive of Shakespeare, emphasizing dramatists such as Marlowe, Jonson, Webster, and Middleton. Offered spring semester of even-numbered years.

ENGL 4350/6350. Seventeenth-Century Poetry. 3 hours.

Prerequisite: Permission of department.

Major English poets of the period, such as Donne, Jonson, Herbert, and Marvell. Offered fall semester of even-numbered years.

ENGL 4400/6400. Restoration and Eighteenth-Century English Drama. 3 hours.

Prerequisite: Permission of department.

Outstanding dramatists of the period: Dryden, Wycherley, Addison, Goldsmith, Sheridan, and others. Offered spring semester of even-numbered years.

ENGL 4420/6420. Early Eighteenth-Century Prose and Poetry. 3 hours.

Prerequisite: Permission of department.

Poetry and prose of the earlier eighteenth century, emphasizing Addison, Steele, Defoe, Swift, and Pope.

Offered spring semester of odd-numbered years.

ENGL 4440/6440. The Age of Johnson. 3 hours.

Prerequisite: Permission of department.

English literature of the late eighteenth century, emphasizing Johnson, Boswell, and their group. Offered fall semester of odd-numbered years.

ENGL(AFAM)(LING) 6040. Language Use in the African American Community. 3 hours.

Prerequisite: Permission of department.

History and structure of the speech and language styles used in the African American community; examination of linguistic and cultural issues that confront the majority of African Americans; the role of the vernacular language of African Americans in society. Not offered on a regular basis.

ENGL(LING) 6070. Middle English. 3 hours.

Prerequisite: ENGL(LING) 4000/6000 or ENGL(LING) 4060/6060 or permission of department.

The English language of the Middle English period, including the development of the language from the end of the Old English period through the transition to Modern English. Not offered on a regular basis.

ENGL 6190. Study of the English Language. 3 hours.

Prerequisite: Permission of department.

The nature, structure, and varieties of the English language in vocabulary, grammar, pronunciation, and semantics. Not offered on a regular basis.

ENGL 6250. Medieval Drama. 3 hours.

Prerequisite: Permission of department.

English drama from its beginnings to the opening of the public theater in 1576. Offered spring semester.

ENGL 6260. Middle English Literature. 3 hours.

Prerequisite: Permission of department.

English literature of the thirteenth, fourteenth, and fifteenth centuries, exclusive of Chaucer and the drama.

Offered spring semester of odd-numbered years.

ENGL 6310. Spenser. 3 hours.

Prerequisite: Permission of department.

A study of *The Faerie Queene*, *The Shepheardes Calender*, and the *Amoretti*, with attention to Spenser's other works and his literary context. Offered spring semester of even-numbered years.

ENGL 6360. Renaissance Prose. 3 hours.

Prerequisite: Permission of department.

Prose of the sixteenth and seventeenth centuries, such as works by More, Sidney, Bacon, Donne, Browne, and Bunyan. Offered spring semester of odd-numbered years.

ENGL 6370. Milton. 3 hours.

Prerequisite: Permission of department.

The works and times of John Milton. Offered fall semester of odd-numbered years.

ENGL 6430. The Eighteenth-Century English Novel. 3 hours.

Prerequisite: Permission of department.

The English novel from Defoe to 1800, including novels by Richardson, Fielding, Smollet, and Sterne, the Gothic novel, and the novel of purpose. Offered fall semester of even-numbered years.

ENGL 6450. William Blake. 3 hours.

Prerequisite: Permission of department.

The works, times, and critical heritage of William Blake. Offered spring semester of even-numbered years.

ENGL 6500. Early Romantic Literature. 3 hours.

Prerequisite: Permission of department.

Wordsworth, Coleridge, and other writers. Offered fall semester.

ENGL 6510. Later Romantic Literature. 3 hours.

Prerequisite: Permission of department.

Byron, Shelley, Keats, and other writers. Offered spring semester.

ENGL 6520. The Nineteenth-Century British Novel. 3-6 hours.

Prerequisite: Permission of department.

The development of the British novel in the nineteenth century. Offered fall semester.

ENGL 6530. Victorian Literature I. 3 hours.

Prerequisite: Permission of department.

Selected prose and poetry of the early nineteenth century. Offered fall semester of even-numbered years.

ENGL 6540. Victorian Literature II. 3 hours.

Prerequisite: Permission of department.

Selected prose and poetry of the later nineteenth century. Offered spring semester of odd-numbered years.

ENGL 6600. Issues in Feminist Theory and Criticism. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Study of topics and approaches in feminist criticism. Offered spring semester of odd-numbered years.

ENGL 6640. Film as Literature. 3 hours.

Prerequisite: Permission of department.

The interpretation of films, with emphasis on the relationships between motion pictures and British

and American literature. Not offered on a regular basis.

ENGL 6650. Modern Drama. 3 hours.

Prerequisite: Permission of department.

The drama of Europe and America from the realism of Ibsen and Strindberg to the present. Not offered on a regular basis.

ENGL 6660. Twentieth-Century British Poetry. 3 hours.

Prerequisite: Permission of department.

British poetry since the 1890's. Offered fall semester of even-numbered years.

ENGL 6670. The Twentieth-Century British Novel. 3 hours.

Prerequisite: Permission of department.

Fiction of such representative British novelists for the twentieth century as Bowen, Conrad, Forster, Joyce, Lawrence, Waugh, Woolf, and Greene. Offered spring semester.

ENGL 6680. Modern Irish Literature. 3 hours.

Prerequisite: Permission of department.

Fiction, poetry and drama of the Irish Renaissance and after. Offered spring semester of even-numbered years.

ENGL 6700. Imperfect Unions: American Writing to 1820. 3 hours.

Prerequisite: Permission of department.

Literature of British North America and the new United States from William Bradford through the early work of Irving and Cooper. Writers may include Rowlandson, Bradstreet, Mather, Byrd, Woolman, Jefferson, Franklin, Equiano, Paine, Bartram, and Brown. Offered fall semester of odd-numbered years.

ENGL 6710. American Writing 1820-1865. 3 hours.

Prerequisite: Permission of department.

The writing that represents the achievement of American literature in the decades before the Civil War. Writers may include Emerson, Thoreau, Poe, Hawthorne, Stowe, Douglass, Melville, Whitman, and Dickinson. Offered spring semester.

ENGL 6720. American Writing 1865-1918. 3 hours.

Prerequisite: Permission of department.

The major fiction and poetry of the period, with some attention to literary movements as well as the impact of the Civil War on American literature. Writers may include Whitman, Dickinson, James, Twain, Chesnut, Crane, Norris, Wharton, and Chopin. Offered fall semester.

ENGL 6730. American Fiction 1918-1960. 3 hours.

Prerequisite: Permission of department.

The development of ideas and forms in American fiction from the end of World War I to 1960. Writers may include Cather, Hemingway, Faulkner,

Fitzgerald, Wright, Steinbeck, Porter, and Baldwin. Offered spring semester of odd-numbered years.

ENGL 6740. American Poetry 1918-1960. 3 hours.

Prerequisite: Permission of department.
Ideas and forms in American poetry from 1918 to 1960. Among the writers to be considered may be Eliot, Pound, H.D., Stein, Stevens, Moore, Williams, and Frost. Offered fall semester of even-numbered years.

ENGL 6750. American Writing After 1960. 3 hours.

Prerequisite: Permission of department.
The ideas and artistic expression of contemporary American prose and poetry. Writers may include Heller, Morrison, O'Brien, Kincaid, Erdrich, Lowell, Plath, Sexton, Rich, Roethke, Forché, Harjo, Howe, Ashbery, Lorde, and Perlman. Offered fall semester of odd-numbered years.

ENGL(AFAM) 6770. Topics in African American Literature. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
Selected topics in African American literature, such as autobiography, the Harlem Renaissance, Gwendolyn Brooks and Richard Wright, Black American literature and aesthetics. Offered spring semester of odd-numbered years.

ENGL 6780. Southern Writing. 3 hours.

Prerequisite: Permission of department.
The literary legacy of the American South. Writers may include Byrd, Poe, Simms, Cable, Chesnut, Glasgow, Toomer, Faulkner, Porter, Hurston, Welty, O'Connor, and Percy. Offered fall semester of even-numbered years.

ENGL 6790. Topics in American Literature. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
Themes, literary traditions, and genres in American writing. Offered fall semester of odd-numbered years.

ENGL 6800. Topics in Forms and Craft. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
Topics in and issues around the act of writing. Sample courses include The Art of Translation, The Art of the Book, The Novel Form, and Publishing and Editing. Offered fall semester.

ENGL 6810. History of Literary Criticism. 3 hours.

Prerequisite: Permission of department.
Literary theory from Plato to the early modern period, examining changing concepts of genre, style, and the social function of literature. Not offered on a regular basis.

ENGL 6820. Contemporary Literary Theory. 3 hours.

Prerequisite: Permission of department.
Major themes and movements in twentieth-century criticism. Not offered on a regular basis.

ENGL 6830. Topics in Criticism and Theory. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
A current critical problem, school, or approach, such as structuralism, poststructuralism, feminism, psychoanalysis, Marxism, New Historicism, gay and lesbian studies, postmodernism, or cultural studies. Offered spring semester.

ENGL 6840. Folklore Studies. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
One or more folk groups, folklore genres, or topics concerning folklore. Not offered on a regular basis.

ENGL 6850. Topics in Multicultural Literature. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
Selected topics focusing on one or more cultures and exploring a variety of literary forms with some attention to historical context and theoretical aspects of multiculturalism. Offered spring semester of odd-numbered years.

ENGL 6860. History of Rhetoric and Textuality. 3 hours.

Prerequisite: Permission of department.
The rhetorical tradition from antiquity to the present, emphasizing the development of writing and textuality. Not offered on a regular basis.

ENGL 6870. Rhetoric and Textual Practice. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.
The relationship between rhetorical theory and the practice of writing, both literary and non-literary. Not offered on a regular basis.

ENGL 6880. College Composition Theory and Pedagogy. 3 hours.

Prerequisite: Permission of department.
Current theories of writing pedagogy and strategies for teaching writing at the college level. Topics include the composing process, invention, revision, and assessment of writing. Not offered on a regular basis.

ENGL 6890. Bibliography and Methods of Research. 3 hours.

Prerequisite: Permission of department.
Bibliographical analysis and description and the study of research materials and methods. Not offered on a regular basis.

ENGL 6900. Practicum in Electronic Textuality. 1-3 hours.

Electronic text resources; management of department-issued individual Unix-shell account (files; file transfer; telnet; mail; newsgroups); use of var-

ious browsers on the World-Wide Web; home access; elementary text manipulation (concording); basic text and image editing; fundamentals of "markup" language (HTML, SGML). Offered fall semester.

ENGL 6910. Apprenticeship in College English. 1 hour. Repeatable for maximum 3 hours credit.

An apprenticeship in the teaching of freshman composition and of sophomore literature. Offered fall, spring, and summer semesters.

ENGL 7000. Master's Research. 3-6 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENGL 7300. Master's Thesis. 3-6 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall and spring semesters.

ENGL 8100. Seminar in English Language Studies. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Special topics in English linguistics. Not offered on a regular basis.

ENGL 8200. Seminar in Medieval Topics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Special topics in Medieval literature. Not offered on a regular basis.

ENGL 8300. Seminar in Literature of the English Renaissance. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Special topics in English literature from More through Milton. Topics will vary. Offered spring semester of even-numbered years.

ENGL 8400. Seminar in Eighteenth-Century Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Swift, Pope, Johnson, Fielding, or Blake. Offered spring semester of odd-numbered years.

ENGL 8500. Seminar in English Romantic Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A major writer or special topics of the period. Offered spring semester.

ENGL 8550. Seminar in Victorian Literature.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Tennyson, Browning, and Arnold. Offered fall semester of odd-numbered years.

ENGL 8600. Seminar in Modern Literature.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

An author or problem in twentieth-century British or American literature. Offered spring semester of even-numbered years.

ENGL 8700. Seminar in American Literature.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A research course on special problems in American literature. Offered fall and spring semesters.

ENGL 8710. Major American Writers. 3 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A detailed examination of the life and works of one or two American authors. Offered fall semester of even-numbered years.

ENGL(AFAM) 8720. Seminar in African American Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A detailed examination of selected forms and ideas in the African American tradition. Offered spring semester of even-numbered years.

ENGL 8750. Seminar in Southern Literature.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Special problems in Southern literature. Not offered on a regular basis.

ENGL 8800. Seminar in Creative Writing.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Advanced instruction in the craft of writing. Offered fall semester.

ENGL(CMLT) 8850. Seminar in Criticism and Theory. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A problem in structuralism, poststructuralism, feminism, psychoanalysis, Marxism, New Historicism, gay and lesbian studies, postmodernism, postcolonialism, or cultural studies; or of a major literary theorist. Not offered on a regular basis.

ENGL 8900. Current Issues in Rhetorical Theory. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Study of contemporary rhetorical theory and its relation to literary criticism and English composition. Not offered on a regular basis.

ENGL 8960. Directed Reading. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Permission of department.
Independent graduate study, under faculty supervision, in special topics not available in scheduled courses. Topics must be approved by the Graduate Committee in English. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

ENGL 9000. Doctoral Research. 3-6 hours. Repeatable for maximum 30 hours credit.
Prerequisite: Permission of department.
Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ENGL 9300. Doctoral Dissertation. 3-6 hours. Repeatable for maximum 30 hours credit.
Prerequisite: Permission of department.
Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Environmental Ethics

Peter Hartel, *Graduate Coordinator*,
542-0898
(Plant Sciences Building)

Please see the Index for information on the certificate program in environmental ethics. The courses having an environmental ethics prefix are listed below.

EETH 4020/6020. Readings in Environmental Ethics. 1-3 hours. Repeatable for maximum 3 hours credit.
Prerequisite: Permission of department.
Discussion of selected books and articles pertaining to environmental ethics. Not offered on a regular basis.

EETH(AGRI) 4190/6190. Agricultural Ethics. 1 hour. One 2-hour lab period.
Ethical issues in agriculture. Topics include animal rights/animal welfare, agriculture as a business/agriculture as a way of life, sustainable agriculture, (bio)technology, migrant farm workers, foreign aid, world hunger, and related topics. Offered fall and spring semesters.
(EETH)PHIL 4220/6220. Environmental Ethics. 3 hours.

Prerequisite: PHIL 2200 or permission of department.
Major professional and nonprofessional writings in the field of environmental ethics. Offered fall semester.

(EETH)PHIL 4250/6250. Technology and Values. 3 hours.

Prerequisite: Permission of department.
Technology in its broadest human context, with emphasis on the mutual influence between means and ends and the impact of technology on shaping the beliefs and attitudes of a civilization. Includes alternative assessments of technology and illustrates with specific crucial issues of our time. Offered spring semester of even-numbered years.

EETH(JURI) 5870/7870. Environmental Dispute Resolution. 2 hours.

Conflict management, anatomy of negotiation, planning and conduct of negotiations, and resolving multiparty environmental disputes. Offered spring semester.

EETH 6000. Environmental Ethics Seminar. 1 hour. One 2-hour lab period.

Prerequisite: Permission of department.
Seminars in environmental ethics. Topics range from animal rights/animal welfare to ecofeminism and deep ecology. Offered fall and spring semesters.

(EETH)ECOL 6200-6200L. Ecological Concepts. 4 hours. Three lectures and one 3-hour lab period.

Ecological science for non-biology majors, using a hierarchical perspective from the global system to the ecology of the individual. Offered spring semester.

EETH 8010. Graduate Research. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Permission of department.
Research project under the direction of a faculty member done independently of regularly scheduled classes. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall and spring semesters.

Genetics

Richard B. Meagher, *Head*
Katherine R. Spindler, *Graduate Coordinator*, 542-8000
(Life Sciences Building)

The Department of Genetics offers graduate programs leading to the MS and PhD degrees. The department is particularly strong in the areas of recombinant DNA

technology, regulation, prokaryotic molecular genetics, plant molecular biology, mammalian genetics, evolutionary genetics, and population genetics. After a student is admitted, a faculty advisory committee is appointed to recommend a program of study based on the individual student's academic background and research interests. A master's degree is not required for entrance into the doctoral program, and students without a master's degree are encouraged to enter the doctoral program directly.

Faculty members associated with three interdepartmental programs in the Division of Biological Sciences—in the RTG for Prokaryotic Diversity, in Cell and Developmental Biology and the Center for Metalloenzyme Studies—have close ties with the Department of Genetics. Graduate course offerings in these interdepartmental programs are available to students in the Department of Genetics and serve to complement the graduate course offerings in genetics.

Physical facilities available for research include all modern equipment and facilities necessary for research in the various areas of genetics. Special on-campus facilities include a DNA and protein sequence and synthesis facility, a molecular marker analysis facility, a complete electron and confocal microscopy laboratory, controlled-environment equipment, equipment for radioisotope studies, a special fermentation facility, a monoclonal antibody production facility, and extensive computer facilities. Cooperative arrangements for joint research exist with such off-campus facilities as the Russell Agricultural Research Center, the Yerkes Primate Center, the Sapelo Island Marine Institute, the Savannah River Ecology Laboratory, and the Oak Ridge National Laboratory.

Prospective students should address inquiries to the Graduate Coordinator, Department of Genetics. E-mail: spindler@arches.uga.edu. Our World Wide Web address is: <http://www.genetics.uga.edu>. Graduate students in the department are eligible for a number of University fellowships and research and teaching assistantships. Applicants for the doctoral program will also be considered for traineeships provided by a Public Health Service Institutional National

Research Service Award. The deadline for application for most fellowships and assistantships is January 1, and students are normally only admitted at the beginning of the fall semester.

GENE 4204/6204. Advanced Genetics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GENE(BIOL) 3204.

Prokaryotic, fungal, and mammalian genetic systems which form the basis of our understanding of molecular genetics. Techniques used in the analysis of the structure and function of viral and eukaryotic genomes. Offered on a regular basis.

GENE(BIOL) 4604/6604. Evolutionary Biology. 3 hours.

Prerequisite: BIOL 1108-1108L.

An introduction to the processes of evolution. Topics include population genetics, speciation, systematics, coevolution, chemical origin of life, history of life, geological record, and evolution of humans. Offered fall semester.

GENE 7000. Master's Research. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GENE 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

GENE 8074. Research Seminar in Population, Evolutionary, and Molecular Genetics. 1-3 hours. Repeatable for maximum 12 hours credit.

Seminar focused on current research in population, evolutionary, and molecular genetics. Offered fall, spring, and summer semesters.

GENE 8084. Current Literature in Population, Evolutionary, and Molecular Genetics. 1-3 hours. Repeatable for maximum 10 hours credit.

Journal Club examining the current literature on selected topics in population, evolutionary, and molecular genetics. Not offered on a regular basis.

GENE 8094. Statistical Analysis of Genetic Data. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: (STAT 4220 or STAT 6220) and STAT 4510/6510.

Common statistical and genetic models approximate for analyzing genetic data, especially DNA sequence data. Emphasis on fitting models, esti-

mating parameters, and making inferences based upon genetic data. Offered spring semester of odd-numbered years.

GENE 8124. Modeling Techniques in Population Genetics. 4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: GENE(BIOL) 4604/6604 and MATH 2210-2210L.

Quantitative techniques used in modeling evolutionary processes such as natural selection, gene flow, mutation, and random genetic drift. Offered fall semester of even-numbered years.

GENE 8134. Evolutionary Genetics. 4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: MATH 2210-2210L or permission of department.

Genetic processes in evolution that integrates elementary conceptual models with the literature on experimental and field studies. Major topics include basic population genetics, an introduction to quantitative genetics, and a consideration of speciation and macroevolution. Offered spring semester of even-numbered years.

GENE 8504. Research Methods in Population Biology. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Methods of data analysis and modeling techniques used in Genetics research. Offered fall semester.

GENE 8604. Genetics Seminar. 1 hour. Repeatable for maximum 4 hours credit. One 1-hour lab period.

Prerequisite: Permission of department.

Seminars emphasizing advances in genetics, molecular genetics, and molecular biology. Offered fall and spring semesters.

GENE 8654. Responsible Science. 1 hour.

Prerequisite: Permission of department.

Ethical issues in genetics, how scientists work, social mechanisms in science, scientific misconduct, conflicts of interest, and other issues related to ensuring integrity of the research process. Offered every year on a regular basis.

GENE 8704. Seminar in Population Genetics.

1 hour. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Evaluation of current research literature in population genetics. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall and spring semesters.

GENE 8834. Advanced Topics in Molecular Genetics. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: BCMB 8020 or GENE 8934 or permission of department.

Genetic regulatory mechanisms, extrachromosomal genetics, molecular aspects of recombination

mechanisms, ribosome synthesis and control, plasmic genetics, and cytogenetics. Offered fall and spring semesters.

GENE 8844. Advanced Topics in Population Genetics. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Advanced aspects of ecological and population genetics. Offered fall and spring semesters.

GENE 8904. Research Techniques in Genetics. 3 hours. Repeatable for maximum 6 hours credit. Five 3-hour lab periods.

Prerequisite: Permission of department.

Techniques employed in genetics research taught by student participation in the research projects of Genetics faculty. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

GENE 8914. DNA Modeling. 2 hours. One lecture and one 3-hour lab period.

The building of space filling models to help students understand the structure/function relationships of RNA and DNA. Computer modeling approaches will also be taught. Offered fall semester.

GENE 8924. Nucleic Acids. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: BCMB 8020 or permission of department.

Structure and function of nucleic acids. The isolation, structure, chemical analysis, hybridization, enzymology, and replication of DNA and RNA, nucleic acids enzymes, protein-nucleic acid interactions and recombinant DNA technology. Offered fall semester.

GENE 8934. Advanced Molecular Genetics. 3 hours.

Prerequisite: BCMB 8010 or GENE 8924.

The molecular mechanisms of gene action in prokaryotes and eukaryotes, including discussions of chromosome structure and replication, mutagenesis and DNA repair, recombination mechanisms, transposition, transcriptions, and translation controls. Offered spring semester.

GENE 8954. Molecular Evolution. 3 hours.

Prerequisite: GENE 4204/6204 or permission of department.

The facts and theories of molecular evolution. Topics include protein evolution, evolution of development, evolution of genome structure, and critical evaluation of contemporary evolutionary theories. Offered spring semester.

GENE(BCMB)(BTNY) 8964. Fungal Genetics. 2 hours.

Prerequisite: GENE 4204/6204 or permission of department.

Analysis of fungi for teaching classical and modern molecular approaches. Offered fall and spring semesters.

GENE 8974. Metazoan Genetics. 3 hours.

Prerequisite: GENE 8934 or permission of department.

Genetic analysis of multicellular animals. Topics include classical and modern genome mapping strategies, regulation of development of complex organ systems, viral genetics, and immunogenetics. Offered every even-numbered year on a regular basis.

GENE 9000. Doctoral Research. 1-10 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GENE 9300. Doctoral Dissertation. 1-10 hours.

Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Geography

George A. Brook, *Head*

Thomas W. Hodler, *Graduate Coordinator*

542-2327

(GGS Building)

The Department of Geography offers master's and doctoral degrees with specialization in physical and human geography and in geographic information science (GIS). The department's strengths are in biogeography, geomorphology, quaternary studies, geoarchaeology, and climatology; urban, economic, transportation, and social and development geography; and cartography, photogrammetry, remote sensing, and GIS. The department has strong ties with the Institute of Ecology; the Center for Archaeological Sciences; the Marine Sciences, Asian Studies, Women's Studies and African Studies programs; the Humanities Center; the Institute of Government; the Terry College of Business; and the Institute for Behavioral Research. As a member of

the Inter-University Consortium for Political and Social Research, the University supports a host of resources and services for social science research. Housed in the Department of Geography is the Center for Remote Sensing and Mapping Science (CRMS). CRMS undertakes interdisciplinary research projects requiring the development of image and map data and processing technologies for applications in the physical, biological, and mapping sciences. The faculty hail from six different countries and so have diverse backgrounds and interests which enrich the graduate programs. There are more than sixty graduate students from the USA and overseas in residence. The MA degree requires 7 core hours and 18 elective hours. For the PhD, the department requires a minimum of 30 credit hours (including 4 core hours if not already taken in the MA program) and a reading knowledge of one foreign language or two technique courses.

Geography has excellent teaching and research facilities in a building shared with the Department of Geology. The two departments jointly operate a Geosciences Learning Center with 25 computers used for graduate computer-aided instruction. The Geomorphology Laboratory, primarily designed for standard wet-chemical and mechanical analyses of soil, sediment, and plant materials, includes a separate work area with PCS, balances, and microscopes. The Plant Microfossil Laboratory is designed principally for the extraction of pollen grains from sediments and includes a separate microscope facility. The Tree-ring Laboratory has a fully automated stage and computercontrolled microscope imaging system for measuring and analyzing tree cores. The Climatology Research Laboratory includes four workstations, one receiving a feed of real-time weather data, and software packages for climatological analysis. A variety of microclimatological instrumentation is also available for student use. In addition to a word processing facility, the department maintains separate laboratories for introductory GIS and cartography; advanced GIS, remote sensing and photogrammetry; and spatial analysis and economic geography. Each laboratory is equipped with state-of-the-art computers,

both PCS and workstations, on a local area network with digitizers, scanners, printers, and plotters with current software in all areas. CRMS also maintains a complex computer network and extensive software for remote sensing, GIS and photogrammetric applications. All students have internet access and electronic mail.

The University's library holdings, particularly in geography, are extensive. Approximately 290,000 sheet maps and over 180,000 aerial photos are maintained in the nearby Science Library. The Computer Center operates one of the largest facilities in the U.S. There are numerous remote sites on campus with interactive terminals, remote printers, and various mini and micro-computer facilities.

For further information, our e-mail address is gradcoordinator@ggy.uga.edu.

GEOG 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GEOG 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

GEOG 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GEOG 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Human and Regional Geography

GEOG 4610/6610. Location Analysis. 3 hours.

Prerequisite: GEOG 3620.

The geography of retail activity and consumer demand. Principles of locational decision-making for retail and service firms. Offered spring semester.

GEOG 4620/6620. Advanced Economic Geography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 3620.

Advanced theoretical and empirical issues in economic geography, such as impacts of globalization, regional development, trade patterns, and labor issues. Topics will vary. Offered spring semester.

GEOG 4630/6630. Advanced Urban Geography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 3630.

Urban growth and approaches to urban analysis. Urbanization processes within urban systems, including economic, demographic, social, and technological change. Offered spring semester.

GEOG 4640/6640. Population Geography. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The distribution of world population and an introduction to population data and to basic demographic techniques. Topics include theories of population change, fertility, mortality, migration, population policy, and population-environment relationships. Offered spring semester.

GEOG 4650/6650. Industrial Geography. 3 hours.

Prerequisite: GEOG 3620.

The regional basis of economic growth and industry case studies. The impact of product and process innovation, entrepreneurship, globalization, and the service economy on the spatial distribution of industry. Offered fall semester.

GEOG 4660/6660. Urban and Regional Development. 3 hours.

Prerequisite: GEOG 3620.

Regional development and the implications of globalization to regional economies of the industrialized countries. Discussions on the changing dynamics of international competition and the reorganization of production. Contemporary trends in regional economic development policy, including high technology and service-sector development. Offered spring semester.

GEOG 4670/6670. Geography of Development. 3 hours.

Prerequisite: GEOG 3620.

Geographical aspects of Third World development, including population growth, migration, industrialization, trade, and foreign aid. The spatial characteristics of economic development are viewed at the conceptual level and implications for policy discussed. Offered spring semester.

GEOG 4710/6710. Geography of Sub-Saharan Africa. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

Geographic and socio-economic issues that face sub-Saharan economies into the twenty-first century. Emphasis on the physical landscape, environmental conditions, social and cultural distributions, and strategies and theories of economic development. Offered fall semester.

GEOG 4720/6720. Geography of South America. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The geography of equatorial and southern South America, including physical, cultural, and economic characteristics of different regions. Prospects for expansion of settlement, development of resources, and growth of industries. Offered spring semester.

GEOG 4730/6730. Geography of China. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630 or permission of department.

The physical and human geography of contemporary China. Emphasis is on modernization and development of agriculture, industry, and transportation within the context of China's resource base and large population. Offered spring semester.

GEOG 4740/6740. Geography of East and Southeast Asia. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The physical and human geography of East and Southeast Asia. Major focus on resources, land utilization, population characteristics and distributions as they relate to economic and political problems. Emphasis is on Japan, Korea, Indonesia, Philippines, and Indo-China. Offered spring semester.

GEOG 8620. Seminar in Economic Geography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 4620/6620.

Empirical and theoretical issues in contemporary economic geography. Specific topics vary. Offered fall semester.

GEOG 8630. Seminar in Urban Geography.

3 hours. Repeatable for maximum 6 hours credit. Prerequisite: GEOG 4630/6630.

Topics and research problems in urban geography. Topics may vary. Offered fall semester.

GEOG 8640. Seminar in Advanced Demographic Analysis. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 4640/6640.

Problems, methods, and techniques in demographic analysis; construction and interpretation of life tables; population estimation and projection; cohort analysis, migration, and household demography. Emphasis is on application of these techniques to geographical analysis of population dynamics. Offered spring semester.

GEOG 8660. Seminar in Regional Development. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 4660/6660.

Topics on regional development and effects of globalization on regional economies of industrialized countries. Specific topics may vary. Offered spring semester.

GEOG 8670. Seminar in the Geography of Development. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 4670/6670.

Research topics related to the geographical aspects of Third World development. Topics may vary. Offered spring semester.

GEOG 8690. Directed Problems in Human Geography. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Problems in advanced topics in human geography. Topics may vary. Non-Traditional Format: Classroom hours are by arrangement with the relevant faculty member and vary depending on credit hours. Offered fall, spring, and summer semesters.

GEOG 8710. Seminar in Regional Geography.

3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department.

Research topics on the geography of a selected region; data sources and methodologies for research. Regions may vary. Offered spring semester.

GEOG 8810. Seminar in Human-Environment Relationships. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Problems, methods, and techniques in human-environment relationships and economic development, including decision-making strategies in resource exploitation. Offered fall semester.

GEOG 8900. Proseminar in Geography. 1 hour.

Prerequisite: Permission of department.

Introduction to the graduate program and the departmental faculty, including major foci of research activities and directions within the department. Offered fall semester.

GEOG 8910. Seminar in Geographic Thought and Methods. 3 hours.

Development of geographical philosophy and methods; contemporary methodological concepts and problems. Required for all graduate majors. Offered fall semester.

GEOG 8920. Seminar in Social Theory in Geography. 3 hours. Repeatable for maximum 6 hours credit.

Contemporary debates concerning space and society. Epistemological and ontological debates within geography relating to the spatial constitution of society and the social production of geographical knowledge. Offered spring semester.

Physical Geography

GEOG 4020/6020. Fluvial Geomorphology. 3 hours.

Prerequisite: GEOG 3010.

Landforming effects of surface-water movement with emphasis on surface-water hydrology, streamflow mechanics, floods, sediment transport and storage, and landform evolution. Field trips included. Offered spring semester.

GEOG 4030/6030. Geomorphology and Environmental Change in Karst and Arid Environments. 3 hours.

Prerequisite: GEOG 3010 or (GEOG 1113 and GEOG 1113L) or GEOL 1250-1250D.

Weathering, erosional and depositional processes, and landforms in karst and arid areas. Formation of sinkholes, sinking streams, caves, springs, sand dunes, playas, and yardangs. Ge archaeological and other evidence on the nature of past environments, including dating cave and aeolian sediments. Field trips included. Offered spring semester.

GEOG 4040/6040. Global Environmental Change During the Quaternary. 3 hours.

Prerequisite: GEOG 3010.

Chronology and geomorphic, isotopic, and palynological evidence of Quaternary paleoclimates. The effects of past climatic changes upon present landscapes, historic short-term fluctuations in temperature and precipitation, and possible explanations for climatic change are emphasized. Offered spring semester.

GEOG 4120/6120. Synoptic Meteorology/Climatology. 3 hours.

Prerequisite: GEOG 3110.

Theory and observations to understand mid-latitude weather systems. Focus is on application of quasi-geostrophic theory in weather forecasting. Analysis and interpretation of weather maps and numerical models will be used to examine atmos-

pheric dynamics and thermodynamics. Offered fall semester.

GEOG 4140/6140. Satellite Climatology. 3 hours. Prerequisite: (GEOG 1111 and GEOG 1111L) or (GEOG 1112 and GEOG 1112L) or (GEOG 2110H and GEOG 2110L).

Satellite remote sensing in climatology, including climatologies of clouds, atmospheric water vapor and precipitation, the Earth's radiation budget, sea and land surface temperatures, and the cryosphere and vegetation. Offered spring semester.

GEOG 4160/6160. Applied Climatology. 3 hours. Prerequisite: GEOG 3110.

The interaction of climate with organisms, communities, and ecosystems. Mechanisms of heat flow, radiation exchanges and water vapor flux; statistical methods used with climatic data; bioclimatic methods used to improve environmental impact assessment; and case studies that demonstrate the role of climate in ecosystem function. Offered spring semester.

GEOG(BTNY) 4220/6220. Ecological Biogeography. 3 hours.

Prerequisite: GEOG 3210 or ECOL(BIOL) 3500-3500L.

Patterns of plant distribution in contemporary landscapes and underlying processes, including vegetation dynamics, disturbance ecology, biogeomorphology, dendrochronology, and environmental history. Offered spring semester.

GEOG(BTNY) 4240/6240. Plant Geography. 3 hours.

Prerequisite: BIOL 1104-1104L and (GEOG 1112 and GEOG 1112L) and [GEOG 3210 or ECOL(BIOL) 3500-3500L].

Phytogeographical zonation, plant-geographic processes, and current potential natural vegetation. Includes physical and environmental factors, plant-environment relationships, plant roles and types, vegetation dynamics, geographic responses to disturbance, and vegetation of main world biomes. Emphasis on global-scale patterns and relationships. Offered spring semester.

GEOG 4810/6810. Conservation Ecology and Resource Management. 3 hours.

Prerequisite: GEOG 1125-1125D.

Ecological and economic analysis of human use of global and regional resources, emphasizing ecological requirements, sustainable use, and holistic decision-making. Topics include ecosystem dynamics, functional biodiversity, landscape management, socioeconomic traps, global change, and ecological restoration. Offered spring semester.

GEOG 8020. Seminar in Geomorphology. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: GEOG 4020/6020 or GEOG 4030/6030.

Advanced problems in geomorphology and physiography. Topics may vary. Offered spring semester.

GEOG 8040. Seminar in Quaternary Paleoenvironments. 3 hours.

Prerequisite: GEOG 4040/6040.

Methods used in reconstructing the hydrological and vegetation characteristics of former environments. Emphasis is on the analysis of cave, fluvial, and marine sediments. The changing Quaternary environments of North America, Europe, and Africa are discussed in detail. Specific topics may vary. Offered spring semester of even-numbered years.

GEOG 8120. Seminar in Climatology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: GEOG 4120/6120 or GEOG 4140/6140 or GEOG 4160/6160.

Advanced topics in physical climatology such as climate change, microclimatology, urban climatology or synoptic climatology. Specific topics may vary. Offered fall semester.

GEOG 8220. Seminar in Biogeography. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: GEOG(BTNY) 4220/6220 or GEOG 4240/6240.

Advanced topics and research trends in biogeography. Specific topics may vary. Offered spring semester.

GEOG 8240. Seminar in Geoecology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Geographical ecology, with specific topics ranging from landscape to global scale (e.g., landscape ecology, regional ecology, conservation problems, biosphere-atmosphere interactions, global ecology and global change). Offered spring semester of odd-numbered years.

GEOG 8290. Directed Problems in Physical Geography. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Advanced problems in physical geography. Topics vary. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

Geographic Techniques and Methods

GEOG 4060/6060. Field and Laboratory Methods in Physical Geography. 3 hours.

Prerequisite: GEOG 3010 or GEOG 3110 or GEOG 3210.

Methods in measurement, observation, recording and synthesis of field data in physical geography. Students conduct field research and present oral and written reports (with maps) of findings. Offered fall semester.

GEOG 4300/6300. Introductory Spatial Analysis. 3 hours.

Prerequisite: GEOG 2300.

Descriptive and inferential techniques used in quantitative geographic analysis. Probability distributions, sampling techniques, parametric and nonparametric inference, analysis of variance, spatial autocorrelation measures and regression procedures. Applications of statistical methods to spatial analysis and geographic research design. Exercises develop knowledge of statistical programming with computer software. Offered spring semester.

GEOG 4310/6310. Cartography Design and Reproduction. 3 hours.

Prerequisite: GEOG 3510-3510L or permission of department.

Design, examination of cartographic literature, map production methods, and their effects on design. Practical applications of desktop publishing, page layout with specific emphasis on state atlas design, map-narrative interactions, four color map reproduction, and photo-cartographic techniques. Offered spring semester of even-numbered years.

GEOG 4330/6330-4330L/6330L. The Use and Interpretation of Aerial Photographs. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Principles and techniques of extracting descriptive and metric information about the environment from aerial photographs acquired in analog and digital forms. Applications emphasize planimetric mapping and interpretation of physical and cultural landscapes. A term project using the techniques is required. Offered fall semester.

GEOG 4350/6350-4350L/6350L. Remote Sensing of Environment. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4330/6330-4330L/6330L.

Remote sensing with emphasis on aerospace applications in the natural sciences. Fundamental properties of the electromagnetic spectrum and remote sensing devices such as multispectral cameras, thermal infrared line scanners, and

television and radar imaging systems. Offered spring semester.

GEOG 4370/6370-4370L/6370L. Introduction to Geographic Information Systems. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CSCI 1301-1301L or sophomore standing or permission of department.

Principles and applications of geographic information systems (GIS). Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, visualization, modeling, and output using one or more GIS software packages. Offered fall, spring, and summer semesters.

GEOG 4410/6410-4410L/6410L. Cartographic Visualization Methods. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 3510-3510L.

Theory and application of computer technology in the preparation of thematic maps and graphics. Emphasis on the creation, analysis, and display of statistical surfaces. Students explore trends in cartographic visualization methods, including interactive and animated mapping techniques. Offered fall semester.

GEOG 4430/6430-4430L/6430L. Advanced Photogrammetry. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4330/6330-4330L/6330L.

Theories of analytical and digital (soft copy) photogrammetry as applied to topographic mapping. Topics include refinement of photographic measurements, coordinate transformations, stereoscopic parallax, collinearity equations, aerial triangulation, orthophotography, and digital image correlation. Offered spring semester.

GEOG 4470/6470-4470L/6470L. Geographic Analysis and Geographic Information Systems. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4300/6300 and GEOG 4370/6370-4370L/6370L and CSCI 1302.

Geographic analytical methods and implementation. Theory and concepts of spatial analysis. Description, reduction, and comparison of point, line, area, and volumetric geographic data sets. Implementation and limitation of geographic information systems. Offered spring semester.

GEOG 4920/6920. Special Problems in Area Analysis. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent research and readings on geographical topics by arrangement with specific faculty. Non-Traditional Format: Class hours are by arrangement with the relevant faculty and vary

depending on credit hours. Offered on a regular basis.

GEOG 8300. Multivariate Techniques in Geography. 3 hours.

Prerequisite: GEOG 4030/6030.

Application of multivariate statistical procedures to research problems in geography, with emphasis on peculiarities of such applications. Spatial autocorrelation, areal aggregation, modifiable areal unit problem, spatial interpolation, and trend surfaces are investigated with statistical and GIS software packages. Offered spring semester.

GEOG 8350. Remote Sensing with GIS Applications. 3 hours.

Prerequisite: (GEOG 4350/6350-4350L/6350L and GEOG 4370/6370-4370L/6370L) or permission of department.

Mapping datums, coordinate systems, and accuracy requirements for geographic information systems (GIS). Global positioning system (GPS), softcopy photogrammetry, and digital image processing techniques for GIS database construction. GIS modeling for environmental studies. Includes the use of various software packages. Offered spring semester.

GEOG 8390. Directed Problems in Quantitative Geographic Methods. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Topics in statistical analysis of geographic data and geographic modeling. Non-Traditional Format: Class hours are by arrangement with the relevant faculty and vary depending on credit hours. Offered fall and spring semesters.

GEOG 8450. Problems in Remote Sensing of Environment I. 3 hours.

Prerequisite: GEOG 4350/6350-4350L/6350L.

Advanced problems in photointerpretation, photogrammetry and remote sensing. Topics may vary. Emphasis on research and applications. Offered spring semester.

GEOG 8510. Seminar in Cartography. 3 hours.

Prerequisite: GEOG 4310/6310 or GEOG 4410/6410-4410L/6410L.

Special problems in the application of cartography. Emphasis on problems involving map design and production, computer graphics, map perception, cartographic visualization, and map animation. Offered spring semester.

GEOG 8530. Advanced Topics in the Use and Interpretation of Aerial Photographs. 3 hours.

Prerequisite: GEOG 4330/6330-4330L/6330L.

The extraction of quantitative and qualitative information from aerial photographs, with emphasis on appropriateness of various approaches and on means of improving interpretation accuracy.

Includes applications involving physical, human, and regional geography. Offered spring semester.

GEOG 8550. Problems in Remote Sensing of Environment II. 3 hours.

Prerequisite: GEOG 4350/6350-4350L/6350L.

Advanced problems in photointerpretation, photogrammetry, and remote sensing. Topics may vary. Emphasis on research and applications. Offered fall semester.

GEOG 8570. Seminar in Geographic Information Systems. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: GEOG 4370/6370-4370L/6370L and permission of department.

Problems in geographic information systems, including methods and techniques and the application to specific topical areas. Offered spring semester.

GEOG 8590. Directed Problems in Geographic Techniques. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Topics in mapping sciences, such as cartography, air-photo interpretation, remote sensing, photogrammetry, and geographic information systems. Non-Traditional Format: Class hours are by arrangement with relevant faculty and vary depending on credit hours. Offered fall, spring, and summer semesters.

Geology

Samuel E. Swanson, *Head*

David B. Wenner, *Graduate Coordinator*,
542-2652
(GGG Building)

The department offers instruction and opportunities for research in archaeological geology, economic geology, geochemistry, clay mineralogy, geophysics, hydrogeology, marine geology, mineralogy, paleontology, micropaleontology, petrology, stratigraphy-sedimentology, and other fields. Graduate programs leading to the MS and PhD are individually arranged to fit each student and his/her background.

Facilities for graduate training and research include analytical and experimental laboratories containing X-ray diffraction equipment, mass spectrometers, FTIR and an electron microprobe. Special facilities include a stable isotope laboratory, a potassium-argon laboratory, an experimental petrology laboratory,

equipment for seismological studies, a cathodoluminescope, a carbon-14 and tritium dating laboratory, a neutron activation analysis laboratory, paleontological and sedimentological laboratories, and laboratories for sample preparation, optical determination, 12 station computer lab and photo-microscopy. The university's Marine Institute on Sapelo Island and the Skidaway Institute of Oceanography at Savannah provide facilities for research in marine geology. Companion facilities include the university computer center, electron microscopy laboratory, field vehicles, instrument shops, and rock, mineral, and fossil collections.

GEOL 4050/6050. Facies Models and Stratigraphy. 3 hours.

Prerequisite: GEOL 4010-4010L.

Sedimentary processes in major siliciclastic and carbonate depositional environments. Factors affecting deposition and erosion of sediments on time scales of hundreds of years to hundreds of thousands of years. Offered fall semester.

GEOL 4060/6060. Structural Geology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 4020-4020L.

Stress and strain within the earth, and the mechanical properties and behavior of earth materials. Geologic structures, their recognition and interpretation in the field, and solution of structural problems. Framework of the earth's crust; evolution of mountain belts, continents, and basins. Relation between structures, deformation, and plate tectonics. Offered spring semester.

GEOL 4090/6090. Marine Geology. 3 hours.

Prerequisite: (GEOL 1122 and GEOL 1122L) or GEOL 1260-1260L.

The geologic aspects of ocean basins, including morphology, sedimentation processes, and mode of origin. Offered fall semester.

GEOL 4110/6110. Principles of Geochemistry. 3 hours.

Prerequisite: (CHEM 1212 and CHEM 1212L and GEOL 3010-3010L) or permission of department. Distribution of elements and isotopes in minerals, rocks, and waters. Principles governing the migration and behavior of elements and isotopes. Offered fall semester.

GEOL 4220/6220. Hydrogeology. 3 hours.

Groundwater in the hydrologic cycle. Examination of flow through porous media, regional flow, influence of wells, water chemistry, and contaminant transport. Emphasis on practical environmental problems. Offered fall semester.

GEOL 4250/6250. Field Methods in Geology. 2 hours. One lecture and one 3-hour lab period.

Prerequisite: GEOL 3010-3010L.

Prerequisite or corequisite: GEOL 3020-3020L.

Field measurement of geologic parameters, accurate recording of observations, production and interpretation of geologic maps and cross sections, and the recognition of structures and lithologies in the field. Non-Traditional Format: Two day weekend field trips are required. Offered spring semester.

GEOL 4270/6270. Geology Field School. 12 hours.

Prerequisite: GEOL 3020-3020L or GEOL 4010-4010L or GEOL 4020-4020L or GEOL 4250/6250.

Theory and practice of field measurement, large scale planimetric and topographic mapping, and grid surveying. Graphic presentation of field data. Geologic mapping projects, including interpretation of observed geologic features. Summary maps and reports must be prepared and defended in the field. Student must demonstrate mastery of the knowledge and skills taught in the required on-campus major courses. Course may be taken through UGA Studies Abroad program in Geology Field School. Non-Traditional Format: Taught in the field during the summer term. Instructional methods include lectures, demonstrations, field trips, as well as supervised field study. Offered summer semester.

GEOL 4300/6300. Igneous and Metamorphic Petrology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4020-4020L.

Textures, mineralogy, and classification of the common igneous and metamorphic rocks. Origin of magmas and volcanoes and their impact on civilizations; evolutions of continental and oceanic crusts; metamorphic rocks as probes of crustal processes. Offered fall semester.

GEOL 4310/6310. Economic Geology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4020-4020L.

Classification and origin of base and precious metal ore deposits; relationships between ore deposits, host rocks, and plate tectonics; principles of ore deposit exploration and evaluation. Offered spring semester of even-numbered years.

GEOL 4330/6330. Geology of North America. 3 hours.

Prerequisite: GEOL 1260-1260L.

Evolution of North American continent through time. Stratigraphic, sedimentary, and magmatic history and tectonic development of various regions since the early Precambrian. Paleontological record of environmental and biological changes. Origin of energy, mineral, soil, and water resources. History of human habitation and resource utilization. Current environmental haz-

ards and challenges. Offered spring semester of even-numbered years.

GEOL(ANTH) 4340/6340. Archaeometry. 3 hours. Prerequisite: GEOL(ANTH) 4700/6700.

Methods of archaeometric analysis including chronometric and instrumental techniques. Absolute age dating and characterization of archaeological materials by physico-chemical analysis. Offered spring semester of even-numbered years.

GEOL 4350/6350. Geology of the Planets and Moons. 3 hours.

Prerequisite: GEOL 3020-3020L and GEOL 4020-4020L.

Geology of the planets, moons, and asteroids, including internal, surficial, and atmospheric processes. Studies in comparative planetology aimed at showing how unique the current life-supporting environment of the Earth is, and why other planets have undergone such dramatically different evolutions. Offered fall semester of odd-numbered years.

GEOL 4370/6370. Data Analysis in the Geosciences. 3 hours.

The principles of data analysis, including data collection methods, graphical presentation, and basic statistics. Offered fall semester of even-numbered years.

GEOL 4410/6410. Introduction to Research in Archeogeology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to Archeogeology. Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4420/6420. Introduction to Research in Geochemistry. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to geochemistry. Non-Traditional Format: Taught as a directed study, although traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4430/6430. Introduction to Research in Geophysics. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to geophysics. Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4440/6440. Introduction to Research in Hydrogeology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to hydrogeology. Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4450/6450. Introduction to Research in Mineralogy. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to mineralogy. Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be employed when appropriate. Not offered on a regular basis.

GEOL 4460/6460. Introduction to Research in Paleontology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to paleontology. Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4470/6470. Introduction to Research in Petrology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to petrology. Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4480/6480. Introduction to Research in Sedimentary Geology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques appropriate to sedimentation and stratigraphy. Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4490/6490. Introduction to Research in Structure/Tectonics. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to structural geology and/or tectonics. Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 4500/6500. Sedimentary Petrology. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: GEOL 3010-3010L.

Mineralogical, petrological, and geochemical study of sedimentary rocks (shales, sandstones, limestones, dolostones, cherts, evaporites, phosphorites, etc.) to interpret origins of sedimentary grains and to understand porosity and permeability of water/rock interaction in and diagenesis of sedimentary rocks. Offered spring semester.

GEOL 4510/6510. Marine Micropaleontology. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: GEOL 4010-4010L.

Geologic history and applications of marine microfossils, especially foraminifera, calcareous nannoplankton, radiolaria, and diatoms. Offered spring semester of even-numbered years.

GEOL 4520/6520. Paleocology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: (GEOL 1260-1260L and GEOL 3030) or permission of department.

The ecological factors affecting the distribution and abundance of fossil organisms, with emphasis on marine invertebrates. Invertebrates as a guide to environments of the past and as indicators of environmental change. Taphonomy of invertebrates. Offered fall semester of even-numbered years.

GEOL 4550/6550. Clay Mineralogy and Geochemistry. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 3010-3010L.

Clay minerals with emphasis on x-ray diffraction analysis and identification of mixed layer systems. Geochemical factors for clay origin and uses including applications to soils, petroleum, archeological, environmental and economic ore deposit studies. Offered fall semester of odd-numbered years.

GEOL 4560/6560. Weathering and Diagenesis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 1211 and CHEM 1211L and GEOL 3020-3020L.

Global cycling of major elements. Rock-water interactions. Kinetics of mineral dissolution and growth in soil, marine, freshwater, sedimentary basins and hydrothermal systems. Geochemical models for estimating reaction rates and reservoir capacities/fluxes are considered. Offered fall semester of even-numbered years.

GEOL 4600/6600. Solid Earth Geophysics. 3 hours.

Prerequisite: GEOL 4020-4020L and MATH 2200-2200L.

Analysis of Earth's gravity, magnetic, and seismic wave fields applied to the investigation of structure and dynamics of the Earth's interior. Course will cover theory, methods of analysis, and results of geophysical investigations. Emphasis on major new initiatives in satellite geodesy and digital seismic array studies. Offered fall semester.

GEOL 4620/6620. Exploration Geophysics. 3 hours.

Prerequisite: GEOL 4020-4020L and MATH 2200-2200L.

Geophysical methods for imaging the subsurface. Course will focus on gravity, magnetic, resistivity, seismic refraction, and seismic reflection surveys. Applications discussed include exploration for hydrocarbons and characterization of the shallow subsurface for engineering/groundwater studies. Laboratory will include field experiments and computer modeling studies. Offered spring semester.

GEOL 4640/6640. Geochemical and Geophysical Surveys. 3 hours.

Prerequisite: GEOL 3010-3010L.

Prerequisite or corequisite: GEOL 4020-4020L.

Geochemical dispersion and survey of common pathfinder elements; methods of instrumental analysis used in geochemical exploration. Background theory of gravity, magnetic, electromagnetic, and electrical techniques used in resource exploration. Field based projects. Offered spring semester of odd-numbered years.

GEOL 4660/6660. Field School in Shallow Geophysics. 6 hours. Six lectures and 8-hour lab periods.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L or permission of department.

Techniques for the geophysical prospections of near-surface geology, geohydrology, and geomorphology. Techniques include electro-magnetic, radar, sonar, and magnetism. Non-Traditional Format: Course taught during summer semester utilizing applied field exercises in addition to traditional lecture/lab methods. Offered summer semester.

GEOL 4670/6670. Environmental Instrumental Analysis. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L.

Lecture and laboratory course emphasizing principles and practical experience in chemical analysis of sediments, rocks and water, with particular emphasis on environmentally important organic and inorganic contaminants. Non-Traditional Format: Field trip participation required. Offered spring semester.

GEOL(ANTH) 4700/6700. Archaeological Geology. 3 hours.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L.

Archaeological geology examines the use of earth science methods and theories in the study of archaeological sites and their contents. The four major areas covered include: (1) the archaeological site and geology; (2) age determination techniques; (3) exploration techniques; (4) artifact characterization. Offered spring semester.

GEOL 4750/6750. Earth Sciences for Middle School Teachers. 3 hours. Two lectures and one 2-hour lab period.

Fundamentals of earth sciences for middle school teachers. Map interpretation; minerals and rocks; principles of astronomy, meteorology and oceanography. Processes at the surface and inside the Earth. Emphasis on plate tectonics; geologic time scale, evolution of life, and a study of fossils. Geology and resources of Georgia. Offered spring semester.

GEOL 4900/6900. Seminar in Geohydrology.

1 hour. Repeatable for maximum 6 hours credit. Current and classical studies in geohydrology. Offered fall and spring semesters.

GEOL 4910/6910. Seminar in Geochemistry.

1 hour. Repeatable for maximum 6 hours credit. Current and classical studies in geochemistry. Offered spring semester.

GEOL 6130. Aqueous Environmental Geochemistry. 3 hours.

Prerequisite: GEOL 4110/6110.

Chemical behavior of natural aquatic systems: chemical kinetic and equilibrium relationships controlling the quality of surface and subsurface waters, both pristine and polluted. Distribution and behavior of chemical species in aqueous environments. Offered spring semester.

GEOL 7000. Master's Research. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GEOL 7300. Master's Thesis. 1-12 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

GEOL 8010. Advanced Topics in Archaeological Geology. 1-3 hours. Repeatable for maximum 9 hours credit.

Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study using traditional lecture and lab exercises when appropriate. Not offered on a regular basis.

GEOL 8020. Advanced Topics in Geochemistry.

1-3 hours. Repeatable for maximum 9 hours credit. Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8030. Advanced Topics in Geophysics. 1-3 hours. Repeatable for maximum 9 hours credit. Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8040. Advanced Topics in Hydrogeology. 1-3 hours. Repeatable for maximum 9 hours credit.

Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be used when appropriate. Not offered on a regular basis.

GEOL 8050. Advanced Topics in Mineralogy. 1-3 hours. Repeatable for maximum 9 hours credit. Intensive study under the direction of a staff member on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when applicable. Not offered on a regular basis.

GEOL 8060. Advanced Topics in Paleobiology. 1-3 hours. Repeatable for maximum 9 hours credit. Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8070. Advanced Topics in Petrology. 1-3 hours. Repeatable for maximum 9 hours credit. Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8080. Advanced Topics in Sedimentary Geology. 1-3 hours. Repeatable for maximum 9 hours credit.

Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8090. Advanced Topics in Structural Geology. 1-3 hours. Repeatable for maximum 9 hours credit.

Intensive study under the direction of staff members on approved topics. Non-Traditional Format: Taught as a directed study but traditional lectures and lab exercises may be utilized when appropriate. Not offered on a regular basis.

GEOL 8100. Microchemical Analysis of Geologic Materials. 3 hours. One lecture and two 3-hour lab periods.

Theoretical and laboratory study of microchemical analytical techniques commonly used to analyze the composition of geologic materials.

Includes training on the operation of the JEOL 8600 Superprobe for geochemical analysis. Offered fall semester.

GEOL 8110. Paleooceanography. 3 hours. Prerequisite: GEOL 4010-4010L and GEOL 4090/6090.

History of temporal and environmental changes in physical, chemical, and biological components of the ocean as recorded in deep-sea sediments and oceanic crust. Emphasis is placed on the role of paleoclimates in the evolution of the ocean. Offered spring semester of even-numbered years.

GEOL 8120. Paleobiodiversity. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: GEOL 4520/6520 or permission of department.

Pattern, process and causal mechanisms of modern and fossil biodiversity issues. Offered fall semester of odd-numbered years.

GEOL 8130. Paleocommunities. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOL 4010-4010L.

Geologic history and paleoecology of fossil associations through time with emphasis on the marine fossil record. Offered spring semester.

GEOL 8140. Sequence Stratigraphy. 3 hours.

Prerequisite: GEOL 4010-4010L.

Principles of sequence stratigraphy. Roles of sediment supply, subsidence, and eustasy in the accumulation of sediments on time scales of tens of thousands of years and longer. Offered fall semester of odd-numbered years.

GEOL 8150. Earth Surface Geochemistry. 3 hours.

Prerequisite: GEOL 4110/6110.

Geochemical principles, materials, and processes related to the near-earth-surface environment. Systems studied include weathering and shallow groundwater; rivers, lakes, and oceans; diagenesis and deep groundwater; and the linkage of the rock and water cycles. Offered spring semester of odd-numbered years.

GEOL 8160. Advanced Igneous Petrology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4300/6300.

Mineralogy, petrology, and chemical compositions of igneous rocks. Origin and evolution of magmas and the causes and characteristics of volcanic eruptions including effects on climate and societies. Non-Traditional Format: One weekend field trip is required. Offered spring semester of even-numbered years.

GEOL 8180. Sandstone Petrology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 3010-3010L.

Petrology of sandstones: classifications, mineralogy, geochemistry, provenance, diagenesis, porosity, and hydrogeology of sandstones. Labo-

ratory examination of sandstone mineralogies and diagenetic fabrics. Offered spring semester of odd-numbered years.

GEOL 8200. Carbonate Petrology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 3010-3010L and GEOL 4010-4010L.

Petrology, mineralogy, and geochemistry of limestones, dolostones, speleothems, travertines, and other carbonate-bearing geological materials. Precipitation of carbonate minerals, origin of carbonate grains, neomorphism, diagenesis, dolomitization, silicification, porosity, and permeability in carbonate rocks. Offered spring semester of even-numbered years.

GEOL 8220. Advanced Metamorphic Petrology. 3 hours.

Prerequisite: GEOL 4300/6300.

Rigorous and quantitative study of metamorphic rocks through the use of chemical thermodynamics. A study of chemical equilibrium and solution behavior applied to minerals and geologic fluids is followed by specific applications to metamorphic rocks. Offered spring semester of odd-numbered years.

GEOL 8250. Plate Tectonics. 3 hours.

Prerequisite: GEOL 4020-4020L.

Mechanics of plate motion on a sphere; analysis of earthquake focal mechanisms and state of stress in the lithosphere; paleomagnetism; true polar wander; geologic processes at plate boundaries; forces driving plates. Discussion of papers covering models for convection, fate of slabs, recent results from global tomography, and regional tectonics. Offered fall semester of even-numbered years.

GEOL 8270. Continental Tectonics. 3 hours.

Prerequisite: GEOL 4060/6060.

Growth and evolution of mountain systems, orogenic belts, and related terranes. Emphasis on processes of deformation, metamorphism, and crustal growth; characteristics and evolution of principal structural provinces; plate tectonic driving forces; relations between deformation, magmatism, and sedimentation. Different orogenic belts, ancient and modern, used as comparative examples. Offered spring semester of odd-numbered years.

GEOL 8460. Isotope Geochemistry. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4020-4020L and GEOL 4110/6110.

Theory of isotope fractionation and radioactive decay. Analytical methods for measurement of isotope ratios. Applications of isotope methods in the earth sciences including age dating, studies of chemical cycles in the environment, and evolution of inorganic and organic systems. Offered spring semester of odd-numbered years.

GEOL 8600. Advanced Topics in Seismology. 3 hours.

Prerequisite: (GEOL 4020-4020L and MATH 2210-2210L and PHYS 1212-1212L) or permission of department.

Topics in theoretical and observational seismology. Wave propagation, time series analysis, geophysical data processing, inverse theory, and seismic array studies of the lithosphere, mantle and core. Topics to vary from year to year. Offered spring semester of even-numbered years.

GEOL 8700. Physical Hydrogeology. 3 hours.

Mathematical treatment of subsurface flow and transport using the hydraulic approach. Both regional and local problems are examined. Emphasis is on selecting the appropriate differential equation and boundary conditions to adequately describe a problem. Practical applications are used to illustrate the approach. Offered fall semester.

(GEOL)FORS 8730. Aquifer Mechanics. 3 hours.

Prerequisite: FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Mechanics of flow through subsurface media, including flow in confined, water table, and leaky aquifers, delayed yield, partially penetrating wells, boundaries, multiple wells, dual porosity media, and fractured rock; use of aquifer tests to estimate aquifer hydraulic properties. Offered spring semester.

GEOL(FORS) 8740. Hydrologic Flow and Transport Modeling. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 8700 or FORS 4120/6120.

Solutions of surface and subsurface flow and transport problems including finite difference, finite element, and boundary integral methods. Analytical techniques include Laplace-, z-, and Fourier-transform, complex variable, and separation of variables methods. Application to problems commonly found in the environmental field, including capture zones, particle-tracking, advection-dispersion, and non-aqueous phase liquids. Offered spring semester of odd-numbered years.

GEOL 8750. Environmental Organic Geochemistry. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and GEOL 1260-1260L.

Origin and distribution of organic compounds in rocks, soils, and water. Biochemistry of major classes of organic compounds found in rocks, soils, and minerals. Emphasis on anthropocentric contamination and geochemistry of remediation. Offered spring semester of even-numbered years.

GEOL(CRSS) 8760. Organic Contaminant Hydrogeology. 3 hours.

Prerequisite: (CHEM 2100 and CHEM 2100L) or (CHEM 2212 and CHEM 2212L) or permission of department.

Physical and chemical processes controlling the mobility and fate of organic contaminants in soils, sediments, surface, and ground waters. Processes include biotic and abiotic (hydrolysis, volatilization, sorption, redox, and photochemical) reactions in the natural systems. Relationships between chemical structure and reactivity in the environment. Offered spring semester of even-numbered years.

GEOL 8770. Hazardous Waste Site Remediation. 3 hours.

Prerequisite: GEOL 6130 and EHSC 4350/6350-4350L/6350L.

The current state of environmental pollution and the application of innovative technologies in clean-up of contaminated soil, sediment, and groundwater. Evaluate the performance and limitations of existing technologies due to site heterogeneity. Offered spring semester of even-numbered years.

GEOL 8780. Environmental Isotopes. 3 hours. Two lectures and one 3-hour lab period.

The use of naturally occurring stable and radiogenic isotopes for solving environmental problems. Principles of isotope fractionation, radionuclide counting methods, applications to solving hydrologic problems, and laboratory techniques for analyzing O-and H-, C-stable isotopes and H-and Rn-radiogenic isotopes. Offered spring semester of even-numbered years.

GEOL 8790. Special Projects in Hydrogeology and Environmental Geology. 3 hours. One lecture and two 3-hour lab periods.

Prerequisite: GEOL 8700 or permission of department.

Environmental geological problems such as sanitary landfills, underground storage tank contaminated sites, mine land pollution areas, and hydrological assessment of wetlands. Non-Traditional Format: Field trip participation is required. Offered spring semester of odd-numbered years.

GEOL 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GEOL 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Inde-

pendent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Germanic and Slavic Languages

Ralf R. Nicolai, *Head*

Marjanne E. Gooz , *Graduate Coordinator*,
542-2450
(Meigs Hall)

The department offers work in all the major fields of Germanistic studies. Required for the master's degree is a reading knowledge of one modern foreign language besides German. Information regarding other requirements for the MA, and MEd degrees in German may be obtained from the coordinator of graduate studies in German. A written comprehensive examination is also required. Required of candidates for all the education degrees, and recommended for all candidates, is experience in constructing language laboratory exercises, recording them, and evaluating their effect on beginning students.

German

GRMN 4010/6010. Advanced German Conversation and Composition. 3 hours.

Prerequisite: GRMN 3020.

Vocabulary building and review of grammar. Emphasis on common errors of English speakers and on distinctions in meaning. Offered fall semester.

GRMN 4300/6300. German Literature from the Enlightenment through Classicism. 3 hours.

Prerequisite: GRMN 3010.

Eighteenth-century German literature and culture from approximately 1740-1806. Representative readings from Enlightenment, Empfindsamkeit, Storm and Stress, and Classicism. Includes texts that provide background on eighteenth-century political, social, and cultural developments. Offered on a regular basis.

GRMN 4400/6400. German Literature from Romanticism through Realism. 3 hours.

Prerequisite: GRMN 3010.

Nineteenth-century German literature and culture from approximately 1795-1900. Representative

readings from early to late Romanticism, Junges Deutschland, Vormærz, Biedermeier, and Realism. Includes texts that provide background on nineteenth-century political, social, and cultural developments. Offered on a regular basis.

GRMN(LING) 4460/6460. Structure of Modern German. 3 hours.

Prerequisite: GRMN 3010.

Linguistic and sociolinguistic structure of modern German with relevant linguistic terminology. Emphasis on phonology, morphology, and syntax. Taught in English. Offered every year on a regular basis.

GRMN 4500/6500. German Literature from Naturalism to the Present. 3 hours.

Prerequisite: GRMN 3010.

Twentieth-century German literature from approximately 1895 to the present. Representative readings from Naturalism, Impressionism, Expressionism, wartime and post-war literature, literature of the GDR, and contemporary literature through post-unification. Includes texts that provide background on twentieth-century political, social, and cultural developments. Offered every year on a regular basis.

GRMN 6100. Medieval German Literature. 3 hours.

Medieval German literature from approximately 800 to 1350. Representative readings from the Old High German and Middle High German periods. Includes texts that provide background on medieval political, social, and cultural developments. Offered every year on a regular basis.

GRMN 6200. Early Modern German Literature. 3 hours.

German literature from approximately 1350 to 1740. Representative readings from Humanism, Renaissance, Reformation, Counter-Reformation, and the Baroque. Includes vernacular and neo-Latin literature by German writers; effect of social, political, religious, and intellectual currents on the German Republic of Letters is considered. Offered every year on a regular basis.

GRMN(LING) 6380. Contrastive Grammar: German-English. 3 hours.

Identification and examination of the salient structural similarities and differences between German and English. Offered every year on a regular basis.

GRMN(LING) 6600. History of the German Language. 3 hours.

The origins of modern standard German from the Indo-European parent language through proto-Germanic, Old and Middle High German, and the early modern period. Offered every year on a regular basis.

GRMN(LING) 6810. German Phonology and Morphology. 3 hours.

Theoretical and applied German phonology and word structure. Taught in English. Offered every year on a regular basis.

GRMN 7000. Master's Research. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

GRMN 7300. Master's Thesis. 3-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

GRMN(LING) 7500. Problems and Methods of Teaching College German. 3 hours.

Methods for teaching foreign language and development of language skills in German. For teaching assistants in German and graduate students in German and Language Education. Taught in English. Offered fall semester.

GRMN(LING) 8320. Gothic. 3 hours.

Morphology, phonology, and history of the Gothic language based on extant texts. Emphasis on the development of earlier stages of the language and on its later language forms. Taught in English. Not offered on a regular basis.

GRMN(LING) 8400. Middle High German. 3 hours.

Phonology and grammar of the language, with extensive readings in the prose, epic, and lyric poetry of the Middle High German era. Offered spring semester.

GRMN 8410. Proseminar. 3 hours.

Bibliography and methodology of research in German literature and linguistics. Survey of literary theory. Required of all graduate students in German. Offered fall semester.

GRMN(LING) 8510. Seminar in German Linguistics. 3 hours. Repeatable for maximum 6 hours credit.

Intensive investigation of a subject or topic in German linguistics. Taught in English. Offered on a regular basis.

GRMN(LING) 8520. Seminar in German Language Variation. 3 hours. Repeatable for maximum 6 hours credit.

Intensive investigation of synchronic and diachronic variation in German. Taught in English. Offered every year on a regular basis.

GRMN 8530. Seminar in German Literature. 3 hours. Repeatable for maximum 6 hours credit. Intensive investigation of a particular genre, theme, topic, or author. Offered every year on a regular basis.

GRMN 8540. Seminar in German Studies. 3 hours. Repeatable for maximum 6 hours credit. Intensive investigation of a particular theme or topic. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered every year on a regular basis.

Russian

RUSS 6980. Directed Study in Russian Literature. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Individual study, reading, or projects in Russian literature under the supervision of a project director. Non-Traditional Format: Directed study. Offered every even-numbered year on a regular basis.

RUSS 6990. Directed Study in Russian and Slavic Linguistics. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Individual study, reading, or projects in Russian and Slavic linguistics under the supervision of a project director. Non-Traditional Format: Directed study. Offered every year on a regular basis.

Gerontology

Leonard W. Poon, *Director & Graduate Coordinator, 542-3954*
(Candler Hall)

The University of Georgia has a strong commitment to gerontology training. Training in gerontology is directed through the Gerontology Center, which offers a Graduate Certificate of Gerontology to complement students' master's and doctoral training. The Certificate requires 15 semester hours of graduate course work in aging (from a variety of departments) along with three semester hours of field experience or three semester hours of research. Please see Index for detailed information on courses and requirements. The courses having a Gerontology prefix are listed below.

GRNT 6000. Seminar in Aging. 3 hours.
Prerequisite: Permission of department.

Basic concepts of gerontology in an interdisciplinary setting to provide the student with a theoretical framework upon which to base further study and research in the field of aging. Offered on a regular basis.

GRNT 6390. Service Learning with the Elderly. 3 hours.

Prerequisite: Permission of department. Supervised field experience designed to assist in reinforcing knowledge, theories, and principles gained through courses in or related to the field of gerontology. Non-Traditional Format: Students meet regularly with their supervising professor. Offered on a regular basis.

GRNT 8000. Advanced Topics in Gerontological Research and Theory. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Interdisciplinary topics and new developments in gerontological research and theory, focused on a specific theme. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

GRNT 8010. Advanced Topics in Gerontology Practice. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Interdisciplinary topics on new developments in the practice of gerontology. Non-Traditional Format: Students meet regularly with their supervising professor. Offered fall, spring, and summer semesters.

Global Policy Studies

William O. Chittick, *Graduate Coordinator, 542-6633*
(Baldwin Hall)

Please see Index for information on the certificate program in global policy studies. The courses having a global policy studies prefix are listed below.

GPST 6000. Global Policy Analysis. 3 hours.

Prerequisite: Six hours of graduate credit. Interdisciplinary and multilevel analyses of global policy problems in the domains of identity, security, and prosperity. Special emphasis on cooperative or collective action solutions to these problems. Course may be taken through UGA Studies Abroad program in Verona. Offered on a regular basis.

GPST 7500. Global Policy Internship. 3 hours. Repeatable for maximum 6 hours credit. Prerequisite: Six hours of graduate credit. Academic portion of an internship providing work or field experience in global policy studies. Course may be taken through UGA Studies Abroad program in Verona. Offered fall, spring, and summer semesters.

History

David D. Roberts, *Head*
Lester D. Langley, *Graduate Coordinator*,
542-2053
(LeConte Hall)

The history department offers work leading to the MA and PhD degrees. The MA program in history consists of 30 semester hours, including HIST 7900 (Theory and Practice of History) and two other 8000-level courses. Additional requirements are: two colloquia in the major field (American or European) and one colloquium in the minor field (American, European or other approved graduate course), reading competence in a foreign language, a thesis, and an oral examination. The PhD student must demonstrate through both written and oral examinations a thorough knowledge of four fields of history or three fields of history and a fourth field in another discipline. In addition, PhD students must complete HIST 7910 (Teaching History in Colleges and Universities), two colloquia in the major field (American or European), one colloquium in the minor field (American, European, or other approved graduate course), and a minimum of 6 semester hours of 8000-level courses. However, if HIST 7910 (or its equivalent) has not been completed, it may be taken with the permission of the major professor and the endorsement of the graduate coordinator and be counted in fulfillment of part of the additional seminar requirement. A reading competence in two foreign languages is required of all doctoral candidates, but with the permission of the major professor and the endorsement of the graduate coordinator, two courses in quantitative methodology may be substituted for one foreign language. A dissertation may be presented in United States, European, or other

selected fields of history. Students holding a BA degree may be admitted into the doctoral program. The PhD requires 30 semester hours beyond the MA for a total of 60 semester hours.

The graduate program stresses research and writing under faculty guidance. In addition, students possessing the MA degree may receive practical experience in teaching by holding teaching assistantships. The department awards a number of teaching assistantships and non-teaching assistantships each year. Application for these should be made directly to the Graduate Coordinator of History. The deadline for applications for financial assistance is January 1.

HIST 4000/6000. Studies in American History. 3 hours. Repeatable for maximum 6 hours credit. Prerequisite: Junior or senior standing.

A special subject not otherwise offered in the history curriculum. Topics, methodology, and instructors vary from semester to semester. Normally, no more than two such courses may be counted toward the major or the minor in history, exceptions being made only by the Coordinator of Instruction. Offered on a regular basis.

HIST 4030/6030. Politics of Morality in the United States. 3 hours.

Origin of selected political and moral dilemmas in American multicultural contexts from the Colonial to the Contemporary period. Offered every year on a regular basis.

HIST 4040/6040. Working Class America. 3 hours.

Using fiction and film as well as traditional texts, the history of working-class women and men in the United States. The emphasis will be on the everyday lives of the laborers—what they did at work and at home, in the union hall, and on the picket line. Offered on a regular basis.

HIST 4050/6050. American Lives. 3 hours. Repeatable for maximum 6 hours credit.

Biographies and autobiographies to explore a variety of themes and issues in American history. Emphases will differ depending on instructor: focus may be nineteenth century, twentieth century, women, race, southern autobiography, etc. Offered on a regular basis.

HIST 4060/6060. American Legal History. 3 hours.

American legal thought, institutions, and education, focusing on the impact of social, political, and economic forces on the legal system. The English background, colonial period, legal foundations of the new nation, and the nineteenth and twentieth centuries. Offered every odd-numbered year on a regular basis.

HIST 4071/6071. Antebellum South. 3 hours.

A chronological and thematic history of the South from Spanish exploration and Jamestown's settlement through the secession crisis of 1860-1861, with an emphasis on the social, cultural, economic, and political aspects of southern life in the colonial and antebellum periods. Offered every year on a regular basis.

HIST 4072/6072. The Civil War Period of American History. 3 hours.

The origin, conduct, and legacy of the war and the impact of the conflict upon peoples and institutions. Offered on a regular basis.

HIST 4073/6073. The Era of Reconstruction, 1865-1877. 3 hours.

The process of reunion, especially in the American South, with emphasis upon the experience of African Americans. Offered on a regular basis.

HIST 4074/6074. The South Since Reconstruction. 3 hours.

Economic, social, cultural, and political developments in the South since Reconstruction. Offered on a regular basis.

HIST 4075/6075. Scientific Interests in the South. 3 hours.

Scientific inquiry in the southeastern region of the United States. Stresses cultural and intellectual milieu, examines special role of natural history, and compares inquiries of southern scientists with those of other contemporary United States scientists. Offered every odd-numbered year on a regular basis.

HIST 4080/6080. Politics of Gender in United States History. 3 hours.

Representations of women's power historically, evaluated critically in terms of gender, race, and class. Offered every year on a regular basis.

HIST 4091/6091. Problems in American Foreign Policy, 1776-Present. 3 hours.

Selected problems related to United States foreign policy. Offered on a regular basis.

HIST 4092/6092. The United States in the Era of the Cold War. 3 hours.

The political, diplomatic, military, and social history of the United States during the era of the Cold War (1946- 1992). Offered on a regular basis.

HIST 4100/6100. History of Georgia. 3 hours.

Using historical scholarship, biography, and film, the Georgia past from pre-history to the present. Themes of race, class, and modernization in the development of Georgia; special emphasis on the lives of everyday Georgians at various points in history. Offered on a regular basis.

(HIST)ESOC 4150/6150. Teaching United States History. 3 hours.

Classic historiography and current debates among historians over major themes and events in United States history. Examination of ways in which this historical scholarship can be incorporated into social studies teaching. Evaluation of materials and methods used to teach United States history in secondary and middle schools. Offered on a regular basis.

HIST 4200/6200. Studies in Latin American History. 3 hours. Repeatable for maximum 9 hours credit.

Special issues or topics in Latin American history not covered in a regular history course. Topics, methodology, and instructor vary from semester to semester. Representative topics include the Latin American revolutionary tradition, the wars of independence in the Americas, and Latin American wars. Offered on a regular basis.

HIST 4210/6210. Latin America: A Socioeconomic History Since 1930. 3 hours.

Latin American social and economic development from the onset of the Depression until the present. The role of the state in economic development; the impact of modernization on traditional social systems; persistence of social inequity amidst development; and the liberal and revolutionary responses to social needs. Offered on a regular basis.

HIST 4220/6220. The United States and Latin America. 3 hours.

The political, economic, and cultural relations between the United States and Latin America from 1776 to the present. Spanish-American revolutions, the Monroe doctrine, United States expansionism, the Pan American system, United States intervention, the Good Neighbor policy, Latin America in the Cold War, and United States and Latin American revolutions. Offered on a regular basis.

HIST 4300/6300. Studies in European History. 3 hours.

Topical studies that vary by year and instructor. Topics might include "Art and Society in the Age of the Reformation," "War and Gender in Twentieth-Century Europe," "Society and Culture in the Medieval European City," and "Imperialism and Anti-imperialism in Modern Europe." Course may be taken through UGA Studies Abroad program in Oxford. Offered on a regular basis.

HIST 4311/6311. Greek History. 3 hours.

Greek history to the time of Alexander the Great. Offered on a regular basis.

HIST 4312/6312. The Hellenistic World. 3 hours.

Problems in Hellenistic history from 330 B.C. to the Roman conquest with emphasis on the

Antigonid, Seleucid, and Ptolemaic dynasties. Offered on a regular basis.

HIST 4321/6321. The Roman Republic. 3 hours.
Roman history to the end of the republic. Offered on a regular basis.

HIST 4322/6322. The Roman Empire. 3 hours.
History of the Roman Empire from 27 B.C. to A.D. 337 with special emphasis on the government of Augustus, reasons for its decline, and the final attempt at unification of the empire under Constantine. Offered on a regular basis.

HIST 4330/6330. Institutions of the Medieval West. 3 hours.

A variety of specific topics in medieval history, such as law and justice, Anglo-Saxon England, politics of the family, and attitudes toward gender and sexuality. Offered on a regular basis.

HIST 4340/6340. Rebirth and Reinvention in Early Modern Europe. 3 hours.

European society in the context of pivotal social, political, and intellectual moments, from the growth of the Humanist movement to the military revolution. The goal is a better understanding of "turning points" in history, and their creation and definition. Offered on a regular basis.

HIST 4350/6350. Material Culture and Consumer Society in Early Modern Europe. 3 hours.

Examines the origins of modern consumerism by looking at production and consumption in pre-industrial Europe. Treats the circulation, possession, and meaning of goods such as clothes, food, books, and objects of art. Themes include consumption as a sign of social status, popular and learned attitudes toward markets, and luxury. Offered on a regular basis.

HIST 4360/6360. European Popular Culture. 3 hours.

The symbols, expressions, and entertainments that all Europeans drew upon from the wealthiest and best educated to the poorest and illiterate. Themes may include material culture, gender identities, folktales, reading practices, religion and worship, music and theatre. Taught as a seminar with extensive readings in primary and secondary sources. Offered on a regular basis.

HIST 4371/6371. The Medieval Mind. 3 hours.

The intellectual history of medieval Europe. The nature of Christian behavior will be examined in the development of premodern ideas on the human body, politics, law, and religion. Offered on a regular basis.

HIST 4372/6372. Intellectual History in Early Modern Europe. 3 hours.

The intellectual heritage of early modern Europe. Students will study the works of humanists, theologians, and philosophers, as well as evaluate the social context in which those works were produced. Offered on a regular basis.

HIST 4373/6373. Nineteenth-Century European Intellectual History. 3 hours.

European thought from 1815-1914, with emphasis on the relationship between ideas and their political and social context. Offered on a regular basis.

HIST 4374/6374. Intellectual History of Twentieth-Century Europe. 3 hours.

Major trends and innovations in European intellectual life, from the fin-de-siècle revolt against positivism to post-structuralism and its critics. Coverage will include such thinkers as Freud, Weber, and Foucault, as well as such wider cultural movements as futurism, surrealism, and existentialism. Offered on a regular basis.

HIST 4381/6381. Politics, Culture, and Society in Stuart England. 3 hours.

Religious, political, and cultural upheavals under the Stuart monarchs, 1603-1704. Not offered on a regular basis.

HIST 4382/6382. Britain from the Age of Revolution to the Age of Victoria 1780-1900. 3 hours.

Britain in the age of the American War of Independence, the French Revolution, and the Industrial Revolution. Special attention will be paid to political culture, intellectual change, and economic development. Course may be taken through UGA Studies Abroad program in Oxford. Offered on a regular basis.

HIST 4383/6383. Britain 1901 to the Present. 3 hours.

Political culture, intellectual change, and economic/imperial readjustment in twentieth-century Britain and beyond. Course may be taken through UGA Studies Abroad program in Oxford. Offered on a regular basis.

HIST 4391/6391. The French Revolution and the First Empire. 3 hours.

The causes and course of Europe's first modern revolution and its reconfiguration by Napoleon Bonaparte. Students will read primary sources and a rich contemporary historiography which illuminate official and popular efforts to reshape government, society, and culture. Taught as a seminar with extensive readings. Offered on a regular basis.

HIST 4392/6392. Twentieth-Century France. 3 hours.

The history of France in the twentieth century, with an emphasis on politics and social change. Offered on a regular basis.

HIST 4400/6400. The Age of World Wars I and II. 3 hours.

The origins, course, nature, and consequences of World Wars I and II in Europe, 1870-1950. Offered on a regular basis.

HIST 4410/6410. Nazism and Fascism in Europe, 1919-1945. 3 hours.

The two totalitarian movements, Italian Fascism and German National Socialism (Nazism), emphasizing the intellectual origins of antidemocratic impulses before and after 1919, the unique social and political factors present in each nation, the personalities of Hitler and Mussolini, and the growth of the totalitarian one-party state. Offered every year on a regular basis.

HIST 4420/6420. Holocausts in History. 3 hours.

The Jewish Holocaust 1933-1945, emphasizing historical precedents and consequences. Traditional religious anti-Semitism, biologically-based racism, and extreme nationalism will be investigated as sources of modern genocidal behavior. Offered every year on a regular basis.

HIST 4500/6500. Studies in African or Middle Eastern History. 3 hours.

Topics in modern and ancient Middle Eastern or African history. Non-traditional methodologies and sources are combined to introduce students to emerging issues in African or Middle Eastern history. Offered on a regular basis.

HIST 4510/6510. History of Famine and Food Systems in Africa. 3 hours.

African agricultural achievement, theories of production and famine systems, and attempts by colonial and international capital to control African food systems. Literature is a major source. Offered on a regular basis.

HIST 4530/6530. The History of Orientalism. 3 hours.

Images and symbolism used by Europeans and Americans to define the Islamic Middle East. The history of the Middle East through representation—stereotypes, myths, fairy tales, novels, films, and news coverage—particularly the ramifications of these images on Western foreign policy towards the Islamic Middle East. Offered on a regular basis.

HIST 4540/6540. Conflict in Twentieth-Century Southern Africa. 3 hours.

South Africa's economic, political and military might has shaped other southern African societies (Namibia, Lesotho, Botswana, Swaziland, Zimbabwe, and Mozambique) in the twentieth century. Reform and revolution which Africans and Europeans employed to regain and maintain African independence in the region. Offered on a regular basis.

HIST 4550/6550. Christianity and Colonialism in Africa. 3 hours.

Christianity was both ally and adversary to colonialism, threatening African "tradition" and aiding a vocal westernized elite which shaped independent African nations. African initiatives in Christian conversion, colonial Christianity, Africans in

mission communities, mission education and westernized elites, independent African religious movements, and Christianity and African nationalism. Offered on a regular basis.

HIST 4600/6600. Studies in Asian History.

3 hours. Repeatable for maximum 9 hours credit. A special issue or topic not otherwise offered in the history curriculum. Topics, methodology, and instructors will vary from semester to semester. Representative topics include "Japan and the Samurai," "Women, Gender and Family in Traditional Japan," and "Court and Countryside in Japan's Golden Age." Offered on a regular basis.

HIST 4700/6700. Themes in Comparative History. 3 hours.

A special subject not otherwise offered in the history curriculum. Topics, methodology, and instructors vary from semester to semester. Offered fall and spring semesters.

HIST 4750/6750. History and Film. 3 hours.

We are living in a post-literate age. Most people now get their history from films instead of books. How film, using a different vocabulary than that of books, recreates the past. Offered on a regular basis.

HIST(PHIL) 4860/6860. History, History of Philosophy, Philosophy. 3 hours.

Historians and philosophers differ in the source of evidence and arguments they use and in the standards to which they appeal. Nonetheless, works in each of these fields raise questions relevant to the other field. The purpose of this course is to explore the main relationships between these two fields. Offered on a regular basis.

(HIST)EDHI 4900/6900. History of American Colleges and Universities. 3 hours.

Prerequisite: HIST 2111 and HIST 2112.

History of American colleges and universities from 1619 to the present. Student life, European antecedents, the nature of the university, the impact of religion, the rise of athletics, the culture of collegiate life, and the influence of society. Offered on a regular basis.

HIST 4960/6960. Directed Readings in History.

3 hours. Repeatable for maximum 6 hours credit. Individual study, reading, or projects under the direction of a project director. Non-Traditional Format: Directed study. Offered every year on a regular basis.

HIST 6521. Eastern Africa to 1800. 3 hours.

Economic, political, and cultural history of eastern Africa to 1800. The origins of agropastoralism, and rise and growth of city-states and kingdoms, the Indian Ocean trading network, and slavery. Offered every year on a regular basis.

HIST 6522. Eastern Africa 1800 to Present. 3 hours.

Economic and cultural history of east Africa from 1800-1900s. Regional systems of food production, trade, and ethnicity, missionary and merchant activity, colonial penetration, African nationalism and independence. Offered on a regular basis.

HIST 6531. Africa in the Americas. 3 hours.

Fifteenth- to nineteenth-century political, social, economic connections between North, Central, South America and Caribbean and west, west-central Africa. Offered on a regular basis.

HIST 6611. Premodern Japan: A Survey for Graduate Students. 3 hours.

Not open to students with credit in HIST 3601. Ancient and medieval Japan, focusing on the institutional and cultural foundations of the Japanese state. Offered fall semester.

HIST 6612. Modern Japan: A Survey for Graduate Students. 3 hours.

Not open to students with credit in HIST 3602. Early modern and modern Japan: the transformation of Japan from an isolationist, agrarian country to a military giant, to a broken and defeated nation, to an economic superpower. Offered spring semester.

HIST 6671. Traditional China. 3 hours.

Intellectual, political, economic, social, literary, religious, and diplomatic developments of China from its beginnings to the Sung Dynasty. Influences of Confucianism, Daoism, and Buddhism on Chinese identity; development and influence of the "Shung-Guo" (Central Kingdom); trade-tribute concepts; the importance of the growth of the family system and gender views. Offered on a regular basis.

HIST 6672. Transitional China. 3 hours.

Internal/external influences that challenge the traditions and cause changes. Influences of nomadic invaders—the Mongols and Manchus—on social and political history, and Buddhist and Daoist influences on Neo-Confucianism. Also, the impact of Christian missionaries and western merchants on modifications of political and economic institutions. Offered on a regular basis.

HIST 6673. History of China III: Revolutionary China. 3 hours.

End of nineteenth through twentieth century, focusing on the Republic of China, its establishment, development, and troubles; the rise of Nationalism and Communism; establishment, development, and troubles of the People's Republic of China; emphasis on what revolutions have occurred in China, the leaders, their important ideas/impact. Offered on a regular basis.

HIST 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department. Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

HIST 7001. Colloquium in North American History: Seventeenth and Eighteenth Centuries. 3 hours.

Major themes in the recent literature on early modern Atlantic rim/North American history. Offered on a regular basis.

HIST 7002. Colloquium in United States History: Nineteenth Century. 3 hours.

Colloquium in which topics, issues, and recent trends in American nineteenth-century history are explored historiographically and thematically. Offered every year on a regular basis.

HIST 7003. Colloquium in United States History: Twentieth Century. 3 hours.

United States history of the twentieth century. Offered on a regular basis.

HIST 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department. Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered every year on a regular basis.

HIST 7321. Colloquium in Premodern European History. 3 hours.

The gradual discovery of the individual in pre-modern Europe. The areas of religion, politics, law, art, and literature. Readings will range from Plato and Thomas Aquinas to Dante and Leonardo da Vinci. Offered on a regular basis.

HIST 7322. Colloquium in Early Modern Europe. 3 hours.

Major themes and current historiography of Europe from 1350 to 1750. Offered on a regular basis.

HIST 7323. Colloquium in Nineteenth-Century European History. 3 hours.

European history from 1750 to 1870. Offered on a regular basis.

HIST 7324. Colloquium in Twentieth-Century Europe. 3 hours.

Major issues in the history and historiography of Europe from 1900 to the present. Offered every year on a regular basis.

HIST 7700. Colloquium in Comparative History. 3 hours. Repeatable for maximum 6 hours credit.

Readings and discussion of major topics in the theory and practice of comparative history. Offered every year on a regular basis.

HIST 7710. Colloquium on Gender in History. 3 hours.

Recent scholarship on gender in European History. The time period of the subject matter will vary with the instructor. Offered on a regular basis.

HIST 7720. Colloquium in Warfare in History. 3 hours. Repeatable for maximum 9 hours credit.

The history of warfare in the context of the warring societies from ancient to modern times. Topics depend on interest of the instructor. Offered on a regular basis.

HIST 7900. Theory and Practice of History. 3 hours.

Methods of research and fundamental theoretical issues pertaining to practicing the science of history, with emphasis on the development of writing skills. Offered fall semester.

HIST 7910. Teaching History in Colleges and Universities. 3 hours.

The variety of methods appropriate to instruction in college-level survey history courses and practices and utilization of audio visual aids and development of classroom tests. Offered on a regular basis.

HIST 8010. Seminar in Early American History. 3 hours. Repeatable for maximum 6 hours credit.

A research seminar in early American history. Native Americans, Spanish and French borderlands, British settlement, elaboration of colonial institutions, colonial wars, the American Revolution, and the rise of the new nation. Offered on a regular basis.

HIST 8020. Seminar in Middle Period United States History. 3-15 hours. Repeatable for maximum 15 hours credit.

A research seminar in which students should produce a potentially publishable paper upon some topic relating to the American South, the American Civil War, or Reconstruction. Offered on a regular basis.

HIST 8030. Seminar in Recent United States History. 3 hours.

Social, intellectual, cultural, and political developments in United States history since 1900. Offered on a regular basis.

HIST 8300. Seminar in Premodern Europe. 3 hours. Repeatable for maximum 12 hours credit.

Selected topics in premodern European history. Offered on a regular basis.

HIST 8310. Seminar in Early Modern Europe. 3 hours.

Research seminar that will allow graduate students to work extensively on a particular theme in early modern European history, 1350-1815. Offered on a regular basis.

HIST 8320. Seminar in Nineteenth-Century European History. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected research topics in nineteenth-century European diplomatic, political, social, economic, and intellectual history. Topics vary. Offered on a regular basis.

HIST 8330. Seminar in Twentieth-Century Europe. 3 hours. Repeatable for maximum 9 hours credit.

Research in twentieth-century European history. Topics will vary according to the interests of the students and instructors. Offered on a regular basis.

HIST 8700. Seminar in World History. 3 hours. Methods, traditions, concepts, and literature of world history. Offered every year on a regular basis.

HIST 8860. Seminar in History. 3 hours. Repeatable for maximum 18 hours credit.

Prerequisite: HIST 7900 or permission of department.

Seminar in historical or historiographical subjects for second-year masters and doctoral students. Offered on a regular basis.

HIST 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

HIST 9010. Directed Study in History. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: HIST 7900 and permission of department.

Directed study for Ph.D. students who have completed all required courses and are preparing for written and oral preliminary examinations. Non-Traditional Format: This course is a directed study and is to help prepare doctoral students for their oral and preliminary examinations once they have completed all other required course work. Offered every year on a regular basis.

HIST 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent

research and preparation of the doctoral dissertation. Offered every year on a regular basis.

Linguistics

William A. Kretschmar, Jr., *Director*
542-5099
(Park Hall)

The Linguistics Program at the University of Georgia is an interdisciplinary program with thirty-one faculty members from nine departments in the Franklin College of Arts and Sciences and three in the College of Education. We offer the MA and the PhD degrees. For further information, please consult the program's Web page at <http://www.linguistics.uga.edu>, or contact the Director, Linguistics Program, Athens, GA 30602-6205. FAX: 706-542-2897. E-mail to request information: admin@linguistics.uga.edu. E-mail to contact the Director: director@linguistics.uga.edu.

Our graduate program is comprised of four tracks of study from which students may choose to satisfy degree requirements: 1) Second Language Acquisition, 2) Cognitive Aspects of Linguistics, 3) Historical Linguistics, and 4) Language Variation and Sociolinguistics.

Second Language Acquisition offers a curriculum which treats the theoretical bases for SLA and is particularly directed at training for college-level language teaching. Students may follow established course sequences for French, Spanish, or German, or may assemble an appropriate set of courses to concentrate on another language. The University of Georgia offers MEd and PhD degrees in TESOL and Foreign Language Education through the Language Education Department of the College of Education.

The Cognitive Aspects of Linguistics track includes the study of theoretical models that show how humans understand language. In conjunction with the Departments of Computer Science and Philosophy, and with the Artificial Intelligence Program, the Linguistics Program offers a computer-based track that requires a solid knowledge of computers and programming. Also available is a

cognitive linguistics curriculum that does not require intensive work with computers.

Historical Linguistics involves both the methodology for comparison and reconstruction of historical languages and an intense, hermeneutic approach to studying ancient languages individually. Students may acquire a close familiarity with the sounds, grammar, and vocabulary of languages like ancient Greek, Sanskrit, Latin, Old Church Slavic, Classical Armenian, Old English, and many others.

Language Variation and Sociolinguistics provides its students with training in empirical linguistics, including the study of the methods commonly used in research on language as people speak it. Courses in this track range from "American English" and "Language Use in the African American Community" to "Discourse Analysis" and "Language, Gender, and Culture."

(LING)ENGL 4000/6000. History of the English Language. 3 hours.

Prerequisite: Permission of department.

The development of present English through the stages of Old English, Middle English, and early Modern English. Study of elementary phonetics, phonemics, sound change, and dialect variation. Offered spring semester.

(LING)ENGL 4010/6010. American English. 3 hours.

Prerequisite: Permission of department.

The history, present status, and future prospects of American English, including standards and internal variation. Not offered on a regular basis.

(LING)ENGL 4060/6060. Old English. 3 hours.

Prerequisite: Permission of department.

The language and literature of England before the Norman Conquest, with reading of selected texts. Offered fall semester.

(LING)ANTH 4090/6090. Cognitive Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major. Folk systems of knowledge, with an emphasis on how people in different societies culturally identify, define, label, and classify phenomena such as color terms, plants, animals, and other environmental resources. Not offered on a regular basis.

(LING)ENGL 4110/6110. English Grammar. 3 hours.

Prerequisite: Permission of department.

English grammar in the scholarly tradition of Curme and Jespersen. Offered spring semester.

(LING)CMSD 4120/6120. Anatomy and Physiology of Speech, Voice, and Hearing. 3 hours.
Prerequisite: Permission of department.

Anatomical structures and basic physiological functions underlying audition, respiration, phonation, articulation, resonance, and swallowing. Offered fall semester.

(LING)CMSD 4140/6140. Introduction to Speech and Voice Science. 3 hours.

Prerequisite: CMSD 4090/6090 and CMSD (LING) 4120/6120 and PSYC 1101 and (MATH 1101 or PHYS 1010 or permission of department).

Application of basic physical principles to production and perception of speech and voice. Biomechanics of vocal fold oscillation; acoustics of voice source; resonance; acoustic phonetics; psychoacoustics of speech and voice. Interpretation of objective measures and outputs of computational models. Offered spring semester.

(LING)ENGL 4170/6170. Second Language Acquisition. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Linguistic theories of second language acquisition, with emphasis on the acquisition of English. Topics include order of acquisition, sociocultural factors with linguistic bases, and neurolinguistic models. Not offered on a regular basis.

(LING)ENGL 4180/6180. ESL Error Analysis. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Psycholinguistic theory applied to problems in second language learning, and the prediction of language behavior through the use of contrastive analysis. Not offered on a regular basis.

LING 4210/6210. Introduction to Indo-European Studies. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The Indo-European language family: the various early Indo-European dialects, their grammatical structures, and the evolution of those structures from the proto-language. Offered every odd-numbered year on a regular basis.

(LING)PHIL 4300/6300. Philosophy of Language. 3 hours.

Prerequisite: Permission of department.

Topics such as formal and ordinary languages, meaning, reference, truth, definition, analyticity, ambiguity, metaphor, symbolism, and the uses of language. Offered every even-numbered year on a regular basis.

(LING)GRMN 4460/6460. Structure of Modern German. 3 hours.

Prerequisite: GRMN 3010.

Linguistic and sociolinguistic structure of modern German with relevant linguistic terminology. Em-

phasis on phonology, morphology, and syntax. Taught in English. Offered every year on a regular basis.

(LING)CMSD 4500/6500. Study of Language Development. 3 hours.

Prerequisite: CMSD 4130/6130 or permission of department.

Normal development of children's reception, integration, and expression of linguistic information; cultural, gender, socioeconomic, cognitive, and prelinguistic influences on language development. Offered on a regular basis.

(LING)PHIL 4510/6510. Deductive Systems. 3 hours.

Prerequisite: PHIL 2500.

Symbolic-mathematical logic, examining the propositional and predicate calculi, with emphasis on problems in translation and formalization and topics in the philosophy of logic and mathematics. Offered fall semester.

(LING)PHIL 4520/6520. Model Theory. 3 hours.

Prerequisite: PHIL(LING) 4510/6510.

Formal semantics for sentential and first-order predicate logic, including both soundness and completeness results for first-order logic. Additional topics may include Goedel's incompleteness results, the Skolem-Lowenheim theorem, or possible world semantics for modal logics. Offered spring semester of even-numbered years.

LING(CLAS) 4610/6610. Sanskrit I. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The phonology, morphology, and syntax of the classical Sanskrit language, emphasizing the position of Sanskrit within the Indo-European language family and its importance for Indo-European linguistics. Offered every odd-numbered year on a regular basis.

LING(CLAS) 4620/6620. Sanskrit II. 3 hours.

Prerequisite: LING(CLAS) 4610/6610.

Continued studies in both the synchronic and diachronic grammar of classical Sanskrit. Offered every odd-numbered year on a regular basis.

LING 4690/6690. Historical Linguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

Traditional methods of historical linguistics are reviewed, with examples from several different language families. Various kinds of possible phonological and syntactic changes are investigated in relation to modern linguistic theory. Offered every odd-numbered year on a regular basis.

LING 4710/6710. Languages in Contact. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The influence of languages on other languages spoken in the same or neighboring areas, includ-

ing pidgins and creoles, with consideration of relationships in phonology, morphology, syntax, semantics, and vocabulary. Not offered on a regular basis.

LING(ANTH) 4860/6860. Sociolinguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The study of language as a cultural and social phenomenon. Topics include language and meaning, language and world view, language and social behavior, and language and social issues. Offered every even-numbered year on a regular basis.

LING(CMLT) 4870/6870. Language, Gender, and Culture. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The role of language and culture in the formation of philosophical assumptions about gender differentiation in society. Offered every year on a regular basis.

LING 4900/6900. Topics in Indo-European Linguistics. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The synchronic and diachronic grammar of an older Indo-European language. Possible offerings include Avestan, Hittite, Lithuanian, Old Church, Slavic, and Old Irish or topics such as Indo-European phonology, morphology, or syntax. Offered every even-numbered year on a regular basis.

(LING)(AFAM)ENGL 6040. Language Use in the African American Community. 3 hours.

Prerequisite: Permission of department.

History and structure of the speech and language styles used in the African American community; examination of linguistic and cultural issues that confront the majority of African Americans; the role of the vernacular language of African Americans in society. Not offered on a regular basis.

(LING)ENGL 6070. Middle English. 3 hours.

Prerequisite: ENGL(LING) 4000/6000 or ENGL(LING) 4060/6060 or permission of department.

The English language of the Middle English period, including the development of the language from the end of the Old English period through the transition to Modern English. Not offered on a regular basis.

(LING)GRMN 6380. Contrastive Grammar: German-English. 3 hours.

Identification and examination of the salient structural similarities and differences between German and English. Offered every year on a regular basis.

LING 6570. Applied Natural Language Processing. 3 hours.

Not open to students with credit in CSCI(LING) 8570.

Computer processing of human languages, intended for linguists with a variable amount of previous computer experience. Emphasis is on use of existing software rather than programming. Offered every odd-numbered year on a regular basis.

(LING)GRMN 6600. History of the German Language. 3 hours.

The origins of modern standard German from the Indo-European parent language through proto-Germanic, Old and Middle High German, and the early modern period. Offered every year on a regular basis.

(LING)FREN 6630. The French Sound System in a Social Context. 3 hours.

French phonetics: the sounds of French as they relate to levels of language from the vernacular to literature. An examination of how sounds vary with relation to region and social class. Practice in class and in the language laboratory. Given in French. Offered every year on a regular basis.

(LING)SPAN 6650. Spanish Phonetics and Phonology. 3 hours.

The Spanish sound system using core concepts of linguistics in general and phonology in particular. Characterization and transcription of spoken Spanish. Analysis of important phenomena of language variation in the Hispanic world, including national, geographical, historical, and social dialects. Given in Spanish. Offered every year on a regular basis.

(LING)FREN 6700. Applied French Linguistics. 3 hours.

Phonology of French as it determines the underlying forms of morphology with an application to the teaching of French to non-native speakers. Emphasis on the concepts of variation, acceptability, and cultural sensitivity. Given in French. Offered every year on a regular basis.

(LING)SPAN 6750. Spanish Syntax and Morphology. 3 hours.

Grammar and language usage in the study of the syntactic and morphological structures of Spanish. The syntax and morphology of the pronoun and verb systems, agreement phenomena, gerunds, comparisons, and modal and aspectual distinctions. Written self-expression on a variety of issues as practical application of grammatical structures discussed in class. Given in Spanish. Offered every year on a regular basis.

(LING)FREN 6800. French Syntax and Meaning. 3 hours.

The syntax of modern French through readings in descriptive analysis and examples of literary texts

to see how word order contributes to meaning. Particular emphasis on levels of style and reflections of social class. Frequent compositions required. Given in French. Offered every year on a regular basis.

(LING)GRMN 6810. German Phonology and Morphology. 3 hours.

Theoretical and applied German phonology and word structure. Taught in English. Offered every year on a regular basis.

(LING)SPAN 6850. Spanish Applied Linguistics. 3 hours.

Phonetic and morpho-syntactic structures that are problematic for the English-speaking student of Spanish. Ways in which culture is encoded in language. Implications of Spanish linguistics for the teaching and learning of Spanish and the linguistic education of language teachers. Given in Spanish. Offered every year on a regular basis.

(LING)FREN 6910. History of the French Language in its Social and Literary Context. 3 hours.

The major changes in the history of the French language, with special attention to the interaction of linguistic and societal changes and to the representation of these changes in literary texts. Given in French. Offered every year on a regular basis.

(LING)SPAN 6950. Spanish Semantics and Pragmatics. 3 hours.

Semantic and pragmatic approaches to the study of meaning in Spanish. Differences between sentence meaning and speaker meaning. Analysis of types of discourse in Spanish such as narrative and free conversation. Given in Spanish. Offered every year on a regular basis.

LING 7000. Master's Research. 3-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Not offered on a regular basis.

LING 7300. Master's Thesis. 3-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Not offered on a regular basis.

(LING)GRMN 7500. Problems and Methods of Teaching College German. 3 hours.

Methods for teaching foreign language and development of language skills in German. For teaching assistants in German and graduate students in German and Language Education. Taught in English. Offered fall semester.

(LING)FREN 7700. Teaching College French. 3 hours.

Principles and methods of second language teaching applied to French. An analysis of techniques used to teach listening, speaking, reading, writing, and culture, with an examination of current theories of language acquisition. Given in French. Offered every year on a regular basis.

(LING)SPAN 7750. Teaching College Spanish. 3 hours.

Foreign language teaching and learning applied to Spanish. Theories of second language acquisition. Techniques and strategies to teach listening, speaking, reading, writing, and culture in context. Activities and procedures of classroom instruction. Issues in the professionalization of Spanish teachers. Given in Spanish. Offered every year on a regular basis.

(LING)ROML 8000. Topics in Romance Languages. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Specific aspects of Romance languages, linguistics, literatures, or cultures. Offered every year on a regular basis.

(LING)SPAN 8010. Topics in Culture, Language, Linguistics, and Literature of the Spanish-Speaking World Seminar. 3 hours. Repeatable for maximum 9 hours credit.

An intensive, integrative, and contextualized study of a specific representative topic in language, literature, culture, and linguistics of the Spanish-speaking world. Given in Spanish. Not offered on a regular basis.

LING 8020. Language Variation. 3 hours.

Regional and social language variation within one language, including the relationship between variation and language change. Historical and present-day illustrations come primarily from English, with consideration of the significance of language variation in our modern social context. Offered every even-numbered year on a regular basis.

(LING)CMSD 8050. Seminar: Language Acquisition and Disorders. 3 hours.

Prerequisite: Permission of department.

Recent issues and research in language acquisition and disorders. Major theories of development, assessment, and intervention, with emphasis on integration of theory and clinical practice. Offered on a regular basis.

LING 8060. Phonetics and Phonology. 3 hours. Not open to students with credit in GRMN(LING) 6810.

Phonetic transcription of various languages dictated by native and non-native speakers; understanding of the phonemic principle by the solution of selected problems which consist of phonetic

cally transcribed data. Offered every year on a regular basis.

LING 8070. Advanced Generative Phonology. 3 hours.

Prerequisite: LING 8060 or permission of department.

The formal nature of phonological rules and representations and how they interact to delimit possible real language phonologies, with attention given to such phenomena as syllabification, tone, and vowel harmony. Not offered on a regular basis.

LING 8080. Seminar in Linguistic Theory. 3 hours. Repeatable for maximum 9 hours credit. Special topics and current issues in linguistic theory. Not offered on a regular basis.

LING 8120. Morphology. 3 hours.

Grammatical analysis of phonemically transcribed data from numerous languages of the world. Offered every odd-numbered year on a regular basis.

(LING)EPSY(PSYC) 8130. Psycholinguistics. 3 hours.

Recent theoretical and experimental work on the psychological aspects of semantics, grammar, and discourse processes are surveyed. Language development is also considered. Offered on a regular basis.

LING 8150. Generative Syntax. 3 hours.

Techniques and formalisms for analyzing syntactic phenomena of human languages within the framework of generative grammar. Examples will be drawn from English. Offered every year on a regular basis.

LING 8160. Advanced Generative Syntax. 3 hours.

Prerequisite: LING 8150.

Formal analysis of syntactic phenomena, such as the passive construction, question formation, and relative clauses, with examples drawn primarily from English. Not offered on a regular basis.

LING 8250. Teaching College Second Language Courses. 3 hours. Repeatable for maximum 9 hours credit.

Not open to students with credit in FREN(LING) 7700, GRMN(LING) 7500 or SPAN(LING) 7750. The teaching of college second language courses, most often for new teaching assistants in less-common languages. Not offered on a regular basis.

LING 8280. Seminar in Second Language Acquisition. 3 hours. Repeatable for maximum 9 hours credit.

Special topics and current issues in second language acquisition. Topics will vary; consult the Linguistics Program office for the specific topics to be covered in any offering of the seminar. Not offered on a regular basis.

(LING)PHIL 8300. Seminar in the Philosophy of Language. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

The original course materials dealing with such topics as formal and ordinary languages, meaning, reference, descriptions, truth, definition, analyticity, speech acts, and the uses of language. Offered every odd-numbered year on a regular basis.

(LING)GRMN 8320. Gothic. 3 hours.

Morphology, phonology, and history of the Gothic language based on extant texts. Emphasis on the development of earlier stages of the language and on its later language forms. Taught in English. Not offered on a regular basis.

(LING)CMSD 8360. Advanced Speech and Voice Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: [(CMSD(LING) 4140/6140 or CMSD 4150/6150)] and CSCI 1100-1100L and permission of department.

Designed for students at the early stages of thesis or dissertation planning. Specific topics vary depending on student/faculty interests. Lecture/discussion format to present research approaches to acoustic phonetics, voice science, and psychoacoustics. Emphasis on available instrumentation, measurement standards, psychophysics, and issues in signal processing of speech and voice. Offered summer semester.

(LING)CMSD 8360L. Laboratory in Advanced Speech and Voice Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: CMSD(LING) 8360 and permission of department.

Hands-on laboratory exercises emphasizing digital recording techniques and signal conditioning; spectral, spectrographic, and aerodynamic measures of speech and voice; indirect measures of laryngeal vibration; computational models of peripheral auditory processing. Offered summer semester.

(LING)GRMN 8400. Middle High German. 3 hours.

Phonology and grammar of the language, with extensive readings in the prose, epic, and lyric poetry of the Middle High German era. Offered spring semester.

LING 8480. Seminar in Cognitive Linguistics. 3 hours. Repeatable for maximum 9 hours credit.

Special topics and current issues in cognitive aspects of linguistics. Not offered on a regular basis.

(LING)GRMN 8510. Seminar in German Linguistics. 3 hours. Repeatable for maximum 6 hours credit.

Intensive investigation of a subject or topic in German linguistics. Taught in English. Offered on a regular basis.

(LING)GRMN 8520. Seminar in German Language Variation. 3 hours. Repeatable for maximum 6 hours credit.

Intensive investigation of synchronic and diachronic variation in German. Taught in English. Offered every year on a regular basis.

(LING)SPCM 8530. Language and Communication Behavior. 3 hours.

Surveys linguistic aspects of human interaction. Examines language patterns such as orality, intensity, immediacy, and power. Analyzes conversational data as well as language structures in public messages.

Not offered on a regular basis.

(LING)CSCI 8570. Natural Language Processing Techniques. 4 hours.

Prerequisite: CSCI(ARTI) 4540/6540 and LING 8150.

Human language from a computational point of view; algorithms and techniques for computer understanding of human-language input. Offered fall semester.

LING 8680. Seminar in Historical Linguistics. 3 hours. Repeatable for maximum 9 hours credit. Special topics and current issues in historical linguistics. Not offered on a regular basis.

(LING)FREN 8800. Seminar in French Linguistics. 3 hours. Repeatable for maximum 9 hours credit.

Topics and issues in French linguistics. Possible offerings include Old French, French dialectology, French sociolinguistics, and French semantics and pragmatics. Given in French. Not offered on a regular basis.

(LING)ANTH 8880. Field Methods in Linguistics. 3 hours.

Prerequisite: Permission of major.

The techniques of recording and analyzing a foreign language by working directly with a native speaker. Not offered on a regular basis.

LING 8980. Seminar in Language Variation and Sociolinguistics. 3 hours. Repeatable for maximum 9 hours credit.

Special topics and current issues in language variation and sociolinguistics. Not offered on a regular basis.

LING 9000. Doctoral Research. 3-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Not offered on a regular basis.

LING 9010. Directed Readings in Linguistics.

3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Advanced directed study of a topic in linguistics. Non-Traditional Format: Directed study. Not offered on a regular basis.

LING 9300. Doctoral Dissertation. 3-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Not offered on a regular basis.

Marine Sciences

Robert E. Hodson, *Head*

Mary Ann Moran, *Graduate Coordinator*,
542-7671

(*Marine Sciences Building*)

The Department of Marine Sciences supports MS and PhD programs. Courses of study are currently offered in the biological, chemical, and physical areas of marine science. Graduate students have access to the extensive field and laboratory facilities of the School of Marine Programs in Athens and at Sapelo Island, Skidaway Island, and Brunswick on the Georgia coast.

MARS 4100/6100. General Oceanography I. 3 hours.

Prerequisite: CHEM 1212 and CHEM 1212L and PHYS 1112-1112L and (GEOL 1260-1260L or BIOL 1108- 1108L).

Structure, composition, dynamics of the oceans. Physical, chemical, biological, and geological processes in the oceans, emphasizing the interaction among the scientific disciplines to understand how the marine system functions. Offered fall and spring semesters.

MARS 4110/6110. General Oceanography II. 3 hours.

Prerequisite: MARS 4100/6100.

A continuation of General Oceanography I, with emphasis on chemical and biological processes. Offered fall semester.

MARS(FORS) 4380/6380-4380L/6380L. Marine Fisheries Biology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L and permission of department.

Interaction of oceanographic processes with the life histories and productivity of marine fisheries species, and the human interactions with major marine fisheries. Offered spring semester.

MARS 4450/6450. Introduction to Marine Chemistry. 3 hours.

Not open to students with credit in MARS 8020-8020L.

Prerequisite: CHEM 1212 and CHEM 1212L and PHYS 1212-1212L and MATH 2200-2200L and MARS 4110/6110.

Chemical properties of oceanic systems, oceanic acid base equilibrium, redox chemistry, nutrient cycling, and radioactive processes. Offered fall semester.

MARS 4500/6500. Field Study in Oceanography and Marine Methods. 5 hours. Fifteen lectures and five 5-hour lab periods.

Prerequisite: Permission of department.

Laboratory and fieldwork in chemical, biological, sedimentological, and physical oceanographic processes and methods in southeast estuarine coastal, and shelf environments. Non-Traditional Format: A field study course taught off-campus. Offered summer semester.

MARS 4510/6510. Field Study in Oceanography and Marine Methods: Independent Research. 3-7 hours. Repeatable for maximum 7 hours credit. Five 8-hour lab periods.

Prerequisite: Permission of department.

Independent field research on oceanographic processes. Non-Traditional Format: A field study course taught off-campus. Offered fall, spring, and summer semesters.

MARS(MIBO) 4620/6620-4620L/6620L. Microbial Ecology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500 or permission of department.

Emphasizes the roles of microorganisms in ecosystems. Nutrient cycles, methods of microbial analysis, and the functional roles of microorganisms. Offered spring semester of even-numbered years.

MARS 4810/6810. Microbial Biogeochemistry. 3 hours.

Prerequisite: [MIBO 3500 and BCMB(BIOL) (CHEM) 3100] or permission of department.

The microbial processes which are or have been important in modifying the earth's lithosphere, hydrosphere, and atmosphere. Microbially mediated precipitation and solubilization of minerals, cycling of dissolved and particulate organic matter in natural waters, and the physiological ecology of microorganisms adapted to extreme environments. Offered spring semester of odd-numbered years.

MARS 7000. Master's Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MARS 7300. Master's Thesis. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

MARS 8010. Biological Oceanographic Processes. 3 hours.

Prerequisite: Permission of department.

Major biological processes in the water column and sediments of estuarine, coastal, and open sea environments, with emphasis on interactions of biota with marine chemical and physical processes. Offered fall semester.

MARS 8020-8020L. Chemical Oceanography. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L and PHYS 1112-1112L and MATH 2210-2210L.

The chemical forms, distributions, and reactivities of major and minor elements in seawater. The use of chemical tracers to investigate biological and physical processes in the ocean. Offered fall semester.

MARS 8030. General Physical Oceanography. 3 hours.

Prerequisite: (MATH 2500 and PHYS 1112-1112L) or permission of department.

Oceanic circulation and elementary dynamical principles. Major topics include observed physical properties of the world's oceans, geostrophy, and vorticity. Offered spring semester.

MARS 8100. Estuarine and Coastal Physical Oceanography. 3 hours.

Prerequisite: MARS 8030 or permission of department.

The distribution of suspended and dissolved material in estuarine and coastal waters. Role of tidal currents, winds, and freshwater discharge. Physical processes leading to mixing in estuarine and shallow coastal water. Field and laboratory collection and analysis of estuarine data. Offered fall semester of odd-numbered years.

MARS 8110. Marine Sediment Diagenesis. 3 hours.

Prerequisite: (MARS 8020-8020L and MATH 2500) or permission of department.

Nature and properties of marine sediment pore waters and surface sediments. Chemical, physical, and biological processes controlling sediment

pore water chemistry and the alteration and recycling of recently deposited sedimentary materials. Offered spring semester of even-numbered years.

MARS 8120. Geophysical Fluid Dynamics. 3 hours.

Prerequisite: (MARS 8030 and MATH 2700 and PHYS 1212-1212L) or permission of department. Fundamental geophysical fluid dynamics of small, medium, and large scale rotating stratified fields. Derivation of the navier-stokes equation, dimensional analyses, quasi-geostrophic approximation, potential vorticity principles, buoyancy-driven flows. Offered fall semester of even-numbered years.

MARS 8130. Seminar in Hydrobiology. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department. Weekly meetings for discussion of current research in marine and freshwater biology and related areas. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall semester.

MARS 8140. Organic Geochemistry. 3 hours. Prerequisite: CHEM 2211 and CHEM 2211L and GEOL 1260-1260L.

The use of specific organic marker compounds as probes for biological and geochemical processes. Early diagenesis of lipids and other biochemicals. Molecular markers for paleoceanographic conditions. Preservation of organic matter and petroleum formation. Offered spring semester of odd-numbered years.

MARS 8150. Ocean Waves. 3 hours.

Prerequisite: (MARS 8030 and MATH 2700 and PHYS 1212-1212L) or permission of department. Physics and mathematics of wave motions in the ocean. Kinetics of waves, phase and group velocities, frequency and wave number dispersion, instabilities, barotropic and baroclinic wave forcing, gravity waves, vorticity waves, internal waves, tides, kelvin waves, planetary rossby waves. Time series and spectral analysis as oceanographic experimental tools. Offered fall semester of odd-numbered years.

MARS 8160-8160L. Marine Ecology. 3 hours.

Prerequisite: ECOL(BIOL) 3500-3500L or permission of department.

The ecology of organisms, populations, and communities occurring in marine environments. Offered spring semester of odd-numbered years.

MARS 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MARS 9300. Doctoral Dissertation. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Mathematics

Kevin F. Clancey, *Head*
Kenneth D. Johnson, *Graduate*
Coordinator, 542-2211
(*Boyd Graduate Studies Research Center*)

The Department of Mathematics offers the MA degree, the MAMS degree, and the PhD degree. Students who are working on the MA degree may choose to major in mathematics with either a thesis option or non-thesis option. The department, along with the Departments of Statistics, Computer Science, and Management Sciences and Information Technology, offers a professional master's degree, Master of Applied Mathematical Science (MAMS). The MAMS degree requires a technical report. The department also cooperates with the College of Education in the MEd degree and the EdD degree with a major in mathematics education.

Language requirements: one foreign language for MA and two foreign languages for PhD (from French, German, and Russian). A computer science or statistics research skills requirement may be substituted for one foreign language.

MATH 4000/6000. Modern Algebra and Geometry I. 3 hours.

Prerequisite: (MATH 3000 and MATH 3200) or permission of department.

Abstract algebra, emphasizing geometric motivation and applications. Beginning with a careful study of integers, modular arithmetic, and the Euclidean algorithm, the course moves on to fields, isometries of the complex plane, polynomials, splitting fields, rings, homomorphisms, field extensions, and compass and straightedge constructions. Offered fall, spring, and summer semesters.

MATH 4010/6010. Modern Algebra and Geometry II. 3 hours.

Prerequisite: MATH 4000/6000.

More advanced abstract algebraic structures and concepts, such as groups, symmetry, group actions, counting principles, symmetry groups of the regular polyhedra, Burnside's Theorem, isometries of $\mathbb{R}^3$, Galois Theory, and affine and projective geometry. Offered spring semester.

MATH 4050/6050. Advanced Linear Algebra. 3 hours.

Prerequisite: MATH 4000/6000.

Orthogonal and unitary groups, spectral theorem; infinite dimensional vector spaces; Jordan and rational canonical forms and applications. Not offered on a regular basis.

MATH 4080/6080. Advanced Algebra. 3 hours.

Prerequisite: MATH 4010/6010 or permission of department.

Linear algebra, groups, rings, and modules, intermediate in level between Modern Algebra and Geometry II and Algebra. Topics include the finite-dimensional spectral theorem, group actions, classification of finitely generated modules over principal ideal domains, and canonical forms of linear operators. Offered fall semester of even-numbered years.

MATH 4100/6100. Real Analysis. 3 hours.

Prerequisite: (MATH 3100 and MATH 3200) or permission of department.

Metric spaces and continuity; differentiable and integrable functions of one variable; sequences and series of functions. Offered fall semester.

MATH 4110/6110. The Lebesgue Integral and Applications. 3 hours.

Prerequisite: MATH 4100/6100 or MATH 4200/6200 or permission of department.

The Lebesgue integral with applications to Fourier analysis and probability. Offered spring semester of even-numbered years.

MATH 4120/6120. Multivariable Analysis. 3 hours.

Prerequisite: MATH 3510 or MATH 4100/6100 or MATH 4200/6200.

A continuation of Real Analysis. The multivariable setting: the derivative as a linear map, inverse and implicit function theorems, change of variables in multiple integrals; manifolds, differential forms, and the generalized Stokes' Theorem. Offered spring semester of odd-numbered years.

MATH 4150/6150. Complex Variables. 3 hours.

Prerequisite: (MATH 2500 and MATH 3100) or MATH 3510.

Differential and integral calculus of functions of a complex variable, with applications. Topics include the Cauchy integral formula, power series and Laurent series, and the residue theorem. Offered every year on a regular basis.

MATH 4200/6200. Point Set Topology. 3 hours.

Prerequisite: MATH 3100 and MATH 3200.

Topological spaces, continuity, connectedness, compactness; separation axioms and Tietze extension theorem; function spaces. Offered every year on a regular basis.

MATH 4220/6220. Differential Topology. 3 hours.

Prerequisite: MATH 4120/6120 and (MATH 4100/6100 or MATH 4200/6200).

Manifolds in Euclidean space: fundamental ideas of transversality, homotopy, and intersection theory; differential forms, Stokes' Theorem, deRham cohomology, and degree theory. Offered fall semester of odd-numbered years.

MATH 4250/6250. Differential Geometry. 3 hours.

Prerequisite: (MATH 2500 and MATH 3000) or MATH 3510.

The geometry of curves and surfaces in Euclidean space: Frenet formulas for curves, notions of curvature for surfaces; Gauss-Bonnet Theorem; discussion of non-Euclidean geometries. Offered every year on a regular basis.

MATH 4300/6300. Introduction to Algebraic Curves. 3 hours.

Prerequisite: MATH 4000/6000 or permission of department.

Polynomials and resultants, projective spaces. The focus is on plane algebraic curves: intersection, Bezout's theorem, linear systems, rational curves, singularities, blowing up. Not offered on a regular basis.

MATH 4400/6400. Number Theory. 3 hours.

Prerequisite: MATH 4000/6000.

Euler's theorem, public key cryptology, pseudo-primes, multiplicative functions, primitive roots, quadratic reciprocity, continued fractions, sums of two squares and Gaussian integers. Offered spring semester.

MATH 4450/6450. Cryptology and Computational Number Theory. 3 hours.

Prerequisite: MATH 4000/6000.

Recognizing prime numbers, factoring composite numbers, finite fields, elliptic curves, discrete logarithms, private key cryptology, key exchange systems, signature authentication, public key cryptology. Not offered on a regular basis.

MATH 4500/6500. Numerical Analysis I. 3 hours.

Prerequisite: MATH 3000.

Prerequisite or corequisite: MATH 3100.

Methods for finding approximate numerical solutions to a variety of mathematical problems, featuring careful error analysis. A mathematical software package will be used to implement iterative techniques for nonlinear equations, polynomial interpolation, integration, and problems in linear algebra such as matrix inversion, eigenvalues and eigenvectors. Offered fall and spring semesters.

MATH 4510/6510. Numerical Analysis II. 3 hours.
Prerequisite: (MATH 2500 or MATH 3510) and MATH 2700 and MATH 4500/6500.

Numerical solutions of ordinary and partial differential equations, higher-dimensional Newton's method, and splines. Offered spring semester.

MATH 4600/6600. Probability. 3 hours.
Prerequisite: (MATH 2500 and MATH 3100) or MATH 3510.

Discrete and continuous random variables, expectation, independence and conditional probability; binomial, Bernoulli, normal, and Poisson distributions; law of large numbers and central limit theorem. Offered every year on a regular basis.

MATH(CSCI) 4630/6630. Mathematical Analysis of Computer Algorithms. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Discrete algorithms (number-theoretic, graph-theoretic, combinatorial, and algebraic) with an emphasis on techniques for their mathematical analysis. Not offered on a regular basis.

MATH(CSCI) 4670/6670. Combinatorics. 3 hours.
Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Basic counting principles: permutations, combinations, probability, occupancy problems, and binomial coefficients. More sophisticated methods include generating functions, recurrence relations, inclusion/exclusion principle, and the pigeonhole principle. Additional topics include asymptotic enumeration, Polya counting theory, combinatorial designs, coding theory, and combinatorial optimization. Offered every year on a regular basis.

MATH(CSCI) 4690/6690. Graph Theory. 3 hours.
Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Elementary theory of graphs and digraphs. Topics include connectivity, reconstruction, trees, Euler's problem, hamiltonicity, network flows, planarity, node and edge colorings, tournaments, matchings, and extremal graphs. A number of algorithms and applications are included. Offered every year on a regular basis.

MATH 4700/6700. Qualitative Ordinary Differential Equations. 3 hours.

Prerequisite: MATH 2700 and (MATH 3000 or MATH 3500).

Transform methods, linear and nonlinear systems of ordinary differential equations, stability, and chaos. Offered every year on a regular basis.

MATH 4720/6720. Introduction to Partial Differential Equations. 3 hours.

Prerequisite: MATH 2700 and (MATH 2500 or MATH 3510).

The basic partial differential equations of mathematical physics: Laplace's equation, the wave equation, and the heat equation. Separation of variables and Fourier series techniques are featured. Offered every year on a regular basis.

MATH 4780/6780. Mathematical Biology. 3 hours.
Prerequisite: MATH 2700 and (MATH 3000 or MATH 3500).

Mathematical models in the biological sciences: compartmental flow models, dynamic system models, discrete and continuous models, deterministic and stochastic models. Not offered on a regular basis.

MATH 4850/6850. History of Mathematics. 3 hours.

Prerequisite: Senior standing.

The development of mathematical thought from ancient times to the present, paying particular attention to the context of today's mathematics curriculum. Not offered on a regular basis.

MATH 4900/6900. Topics in Mathematics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Senior standing.

A special topic not otherwise offered in the mathematics curriculum. Not offered on a regular basis.

MATH 5020/7020. Arithmetic for Middle School Teachers. 3 hours.

Prerequisite: MATH 2200-2200L.

Operations of arithmetic for middle school teachers; number systems; set theory to study mappings, functions, and equivalence relations. Not offered on a regular basis.

MATH 5030/7030. Geometry and Measurement for Middle School Teachers. 3 hours.

Prerequisite: MATH 2200-2200L.

Principles of geometry and measurement for middle school teachers. Not offered on a regular basis.

MATH 5070/7070. Calculus for Advanced Placement Teachers. 3 hours.

Prerequisite: MATH 2500.

Variable calculus designed to prepare in-service secondary school teachers for effective instruction of advanced placement students. Emphasizes concepts and principles underlying differential and integral calculus of a single variable. Not offered on a regular basis.

MATH 5200/7200. Foundations of Geometry I. 3 hours.

Prerequisite: MATH 3000 and MATH 3200.

Advanced elementary geometry for prospective teachers of secondary school mathematics: axiom systems and models; the parallel postulate; neutral, Euclidean, and non-Euclidean geometries. Offered fall and spring semesters.

MATH 5210/7210. Foundations of Geometry II. 3 hours.

Prerequisite: MATH 5200/7200.

Further development of the axioms and models for Euclidean and non-Euclidean geometry; transformation geometry. Offered spring semester.

MATH 5560/7560. Probability and Statistics for Teachers. 3 hours.

Prerequisite: MATH 2200-2200L.

Fundamental ideas of probability with particular emphasis on their applications in statistics. Not offered on a regular basis.

MATH 6800. Directed Reading and/or Projects. 1-6 hours. Repeatable for maximum 30 hours credit.

Directed reading and/or project at the master's level. Non-Traditional Format: Directed study. Offered on a regular basis.

MATH 7000. Master's Research. 1-6 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MATH 7040. Basic Ideas of Calculus I. 3 hours.

Prerequisite: MATH 2210-2210L.

Survey of one-variable calculus in preparation for teaching calculus at the secondary level: combines review of basic techniques with careful study of underlying concepts. Offered on a regular basis.

MATH 7050. Basic Ideas of Calculus II. 3 hours.

Prerequisite: MATH 7040.

A continuation of Basic Ideas of Calculus I focusing on functions of several variables. Offered on a regular basis.

MATH 7100. Technical Report. 3 hours.

For use with the Master's degree in Applied Mathematical Science - Mathematics option. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MATH 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

MATH 8000. Algebra. 3 hours.

A course in groups, fields and rings, designed to prepare the student for the algebra prelims. Some topics covered include the Sylow theorems, solvable and simple groups, Galois theory,

finite fields, Noetherian rings and modules. Offered on a regular basis.

MATH 8010. Representation Theory of Finite Groups. 3 hours.

Prerequisite: MATH 8000.

Irreducible and indecomposable representations, Schur's lemma, Maschke's theorem, the Wedderburn structure theorem, characters and orthogonality relations, induced representations and Frobenius reciprocity, central characters and central idempotents, Burnside's $p^a q^b$ theorem, Frobenius normal p -complement theorem. Offered on a regular basis.

MATH 8020. Commutative Algebra. 3 hours.

Prerequisite: MATH 8000.

Localization and completion, Nakayama's lemma, Dedekind domains, Hilbert's basis theorem, Hilbert's Nullstellensatz, Krull dimension, depth and Cohen-Macaulay rings, regular local rings. Offered on a regular basis.

MATH 8030. Topics in Algebra. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 8000 or permission of department.

Topics in abstract algebra at the level of current research. Offered on a regular basis.

MATH 8080. Lie Algebras. 3 hours.

Prerequisite: MATH 8000.

Nilpotent and solvable Lie algebras, structure and classification of semisimple Lie algebras, roots, weights, finite-dimensional representations. Offered on a regular basis.

MATH 8100. Real Analysis I. 3 hours.

Prerequisite: MATH 4100/6100 or permission of department.

Measure and integration theory with relevant examples from Lebesgue integration, Hilbert spaces (only with regard to L^2), L^p spaces and the related Riesz representation theorem. Hahn, Jordan and Lebesgue decomposition theorems, Radon-Nikodym Theorem and Fubini's Theorem. Offered on a regular basis.

MATH 8110. Real Analysis II. 3 hours.

Prerequisite: MATH 8100.

Topics including: Haar Integral, change of variable formula, Hahn-Banach theorem for Hilbert spaces, Banach spaces and Fourier theory (series, transform, Gelfand-Fourier homomorphism). Offered on a regular basis.

MATH 8150. Complex Variables I. 3 hours.

The Cauchy-Riemann Equations, linear fractional transformations and elementary conformal mappings, Cauchy's theorems and its consequences, including Morera's theorem, Taylor and Laurent expansions, maximum principle, residue theorem, argument principle, Rouché's theorem and Liouville's theorem. Offered on a regular basis.

MATH 8160. Complex Variables II. 3 hours.

Prerequisite: MATH 8150.

Topics including Riemann Mapping Theorem, elliptic functions, Mittag-Leffler and Weierstrass Theorems, analytic continuation and Riemann surfaces. Offered on a regular basis.

MATH 8170. Functional Analysis I. 3 hours.

Prerequisite: MATH 8100.

Hilbert spaces and Banach spaces, spectral theory, topological vector spaces, convexity and its consequences, including the Krein-Milman theorem. Offered on a regular basis.

MATH 8180. Functional Analysis II. 3 hours.

Prerequisite: MATH 8170 or permission of department.

Operator theory, spectral theorem for normal operators, distribution theory, the Schwartz spaces, topics from C^* -algebras and von Neumann algebras. Offered on a regular basis.**MATH 8190. Lie Groups.** 3 hours.

Prerequisite: MATH 8000 and MATH 8250.

Classical groups, exponential map, Poincaré-Birkhoff-Witt Theorem, homogeneous spaces, adjoint representation, covering groups, compact groups, Peter-Weyl Theorem, Weyl character formula. Offered on a regular basis.

MATH 8200. Algebraic Topology. 3 hours.

Prerequisite: MATH 4200/6200.

The fundamental group, van Kampen's theorem, and covering spaces. Introduction to homology: simplicial, singular, and cellular. Applications. Not offered on a regular basis.

MATH 8210. Topology of Manifolds. 3 hours.

Prerequisite: MATH 8200.

Poincaré duality, deRham's theorem, topics from differential topology. Offered on a regular basis.

MATH 8220. Homotopy Theory. 3 hours.

Prerequisite: MATH 8200.

Topics in homotopy theory, including homotopy groups, CW complexes, and fibrations. Offered on a regular basis.

MATH 8230. Topics in Topology and Geometry. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 8200 or permission of department.

Advanced topics in topology and/or differential geometry leading to and including research level material. Offered on a regular basis.

MATH 8250. Differential Geometry I. 3 hours.

Prerequisite: MATH 4200/6200.

Differentiable manifolds, vector bundles, tensors, flows, and Frobenius' theorem. Introduction to Riemannian geometry. Offered on a regular basis.

MATH 8260. Differential Geometry II. 3 hours.

Prerequisite: MATH 8250.

Riemannian geometry: connections, curvature, first and second variation; geometry of submanifolds. Gauss-Bonnet theorem. Additional topics, such as characteristic classes, complex manifolds, integral geometry. Offered on a regular basis.

MATH 8300. Introduction to Algebraic Geometry. 3 hours.

Prerequisite: MATH 8000.

An invitation to algebraic geometry through a study of examples. Affine and projective varieties, regular and rational maps, Nullstellensatz. Veronese and Segre varieties, Grassmannians, algebraic groups, quadrics. Smoothness and tangent spaces, singularities and tangent cones. Offered on a regular basis.

MATH 8310. Geometry of Schemes. 3 hours.

Prerequisite: MATH 8020 and MATH 8300.

The language of Grothendieck's theory of schemes. Topics include the spectrum of a ring, "gluing" spectra to form schemes, products, quasi-coherent sheaves of ideals, and the functor of points. Offered on a regular basis.

MATH 8320. Algebraic Curves. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 8300.

The theory of curves, including linear series and the Riemann-Roch theorem. Either the algebraic (variety), arithmetic (function field), or analytic (Riemann surface) aspect of the subject may be emphasized in different years. Offered on a regular basis.

MATH 8330. Topics in Algebraic Geometry.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 8300.

Advanced topics such as algebraic surfaces, or cohomology and sheaves. Offered on a regular basis.

MATH 8400. Algebraic/Analytic Number Theory I. 3 hours.

Prerequisite: MATH 4080/6080 or permission of department.

The core material of algebraic number theory: number fields, rings of integers, discriminants, ideal class groups, Dirichlet's unit theorem, splitting of primes; p -adic fields, Hensel's lemma, adeles and ideles, the strong approximation theorem. Offered on a regular basis.**MATH 8410. Algebraic/Analytic Number Theory II.** 3 hours.

Prerequisite: MATH 8400 or permission of department.

A continuation of Algebraic and Analytic Number Theory I, introducing analytic methods: the Riemann Zeta function, its analytic continuation and functional equation, the Prime number theorem; sieves, the Bombieri-Vinogradov theorem, the

Chebotarev density theorem. Offered on a regular basis.

MATH 8430. Topics in Arithmetic Geometry. 3 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department.

Topics in Algebraic number theory and Arithmetic geometry, such as class field theory, Iwasawa theory, elliptic curves, complex multiplication, cohomology theories, Arakelov theory, diophantine geometry, automorphic forms, L-functions, representation theory. Offered on a regular basis.

MATH 8440. Topics in Combinatorial/ Analytic Number Theory. 3 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Topics in combinatorial and analytic number theory, such as sieve methods, probabilistic models of prime numbers, the distribution of arithmetic functions, the circle method, additive number theory, transcendence methods. Offered on a regular basis.

MATH 8450. Topics in Algorithmic Number Theory. 3 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Topics in computational number theory and algebraic geometry, such as factoring and primality testing, cryptography and coding theory, algorithms in number theory and arithmetic geometry. Offered on a regular basis.

MATH 8500. Advanced Numerical Analysis I. 3 hours.

Prerequisite: MATH 4510/6510.

Prerequisite or corequisite: MATH 4100/6100.

Numerical solution of nonlinear equations in one and several variables, numerical methods for constrained and unconstrained optimization, numerical solution of linear systems, numerical methods for computing eigenvalues and eigenvectors, numerical solution of linear least squares problems, computer applications for applied problems. Offered on a regular basis.

MATH 8510. Advanced Numerical Analysis II. 3 hours.

Prerequisite: MATH 8500.

Polynomial and spline interpolation and approximation theory, numerical integration methods, numerical solution of ordinary differential equations, computer applications for applied problems. Not offered on a regular basis.

MATH 8520. Advanced Numerical Analysis III. 3 hours.

Prerequisite: MATH 8500.

Finite difference and finite element methods for elliptic, parabolic, and hyperbolic partial differential equations, convergence and stability of those methods, numerical algorithms for the implemen-

tation of those methods. Not offered on a regular basis.

MATH 8550. Special Topics in Numerical Analysis. 3 hours. Repeatable for maximum 18 hours credit.

Prerequisite: MATH 8500.

Special topics in numerical analysis, including iterative methods for large linear systems, computer aided geometric design, multivariate splines, numerical solutions for pde's, numerical quadrature and cubature, numerical optimization, wavelet analysis for numerical imaging. In any semester, one of the above topics will be covered. Offered on a regular basis.

MATH 8600. Probability. 3 hours.

Prerequisite: MATH 8100.

Probability spaces, random variables, distributions, expectation and higher moments, conditional probability and expectation, convergence of sequences and series of random variables, strong and weak laws of large numbers, characteristic functions, infinitely divisible distributions, weak convergence of measures, central limit theorems. Offered on a regular basis.

MATH 8620. Stochastic Processes. 3 hours.

Prerequisite: MATH 8100.

Conditional expectation, Markov processes, martingales and convergence theorems, stationary processes, introduction to stochastic integration. Offered on a regular basis.

MATH 8630. Stochastic Analysis. 3 hours.

Prerequisite: MATH 8100.

Conditional expectation, Brownian motion, semi-martingales, stochastic calculus, stochastic differential equations, stochastic control, stochastic filtering. Offered on a regular basis.

MATH 8700. Applied Mathematics: Applications in Industry. 3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: MATH 4720/6720.

Mathematical modeling of some real-world industrial problems. Topics will be selected from a list which includes air quality modeling, crystal precipitation, electron beam lithography, image processing, photographic film development, production planning in manufacturing, and optimal control of chemical reactions. Offered on a regular basis.

MATH 8710. Applied Mathematics: Variational Methods/Perturbation Theory. 3 hours.

Prerequisite: MATH 4100/6100.

Calculus of variations, Euler-Lagrange equations, Hamilton's principle, approximate methods, eigenvalue problems, asymptotic expansions, method of steepest descent, method of stationary phase, perturbation of eigenvalues, nonlinear eigenvalue problems, oscillations and periodic solutions, Hopf bifurcation, singular perturbation theory, applications. Offered on a regular basis.

MATH 8740. Ordinary Differential Equations. 3 hours.

Prerequisite: MATH 4100/6100.

Solutions of initial value problems: existence, uniqueness, and dependence on parameters, differential inequalities, maximal and minimal solutions, continuation of solutions, linear systems, self-adjoint eigenvalue problems, Floquet Theory. Offered on a regular basis.

MATH 8750. Introduction to Dynamical Systems. 3 hours.

Prerequisite: MATH 8740.

Continuous dynamical systems, trajectories, periodic orbits, invariant sets, structure of alpha and omega limit sets, applications to two-dimensional autonomous systems of ODE's, Poincare-Bendixon Theorem, discrete dynamical systems, infinite dimensional spaces, semi-dynamical systems, functional differential equations. Offered on a regular basis.

MATH 8770. Partial Differential Equations. 3 hours.

Prerequisite: MATH 4100/6100.

Classification of second order linear partial differential equations, modern treatment of characteristics, function spaces, Sobolev spaces, Fourier transform of generalized functions, generalized and classical solutions, initial and boundary value problems, eigenvalue problems. Offered on a regular basis.

MATH 8800. Directed Reading and/or Projects.

1-6 hours. Repeatable for maximum 30 hours credit.

Directed reading and/or project at the doctoral level. Non-Traditional Format: Directed study.

Not offered on a regular basis.

MATH 8900. Seminar in Algebra. 1-3 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in algebra. Offered on a regular basis.

MATH 8910. Seminar in Analysis. 1-3 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in analysis. Offered on a regular basis.

MATH 8920. Seminar in Topology. 1-3 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in topology. Offered on a regular basis.

MATH 8930. Seminar in Algebraic Geometry.

1-3 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in algebraic geometry. Offered on a regular basis.

MATH 8940. Seminar in Number Theory.

1-3 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in number theory. Offered on a regular basis.

MATH 8950. Seminar in Numerical Analysis.

1-3 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in numerical analysis. Offered on a regular basis.

MATH 8960. Seminar in Probability. 1-3 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in probability. Offered on a regular basis.

MATH 8970. Seminar in Applied Mathematics.

1-3 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in applied mathematics. Offered on a regular basis.

MATH 8980. Seminar in Geometry. 1-3 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

A study of some phase of current research in geometry. Offered on a regular basis.

MATH 9000. Doctoral Research. 1-9 hours.

Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MATH 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 40 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Microbiology

Lawrence J. Shimkets, *Head*
 Juergen K. W. Wiegel, *Graduate*
Coordinator, 542-2651
(Biological Sciences Building)

Programs of study leading to both MS and PhD degrees are offered in different fields of

microbiology including microbial genetics, microbial ecology, microbial pathogenesis, cell biology, microbial physiology, anaerobic microbiology, and biotechnology. The department occupies over 34,000 square feet of recently renovated space, with laboratories equipped for electrophoretic analyses, gas-liquid chromatography, high-performance liquid chromatography, tissue culture, radioisotopic studies, light spectroscopy, fluorimetry, cell fractionation, ultracentrifugation, fermentation and computerized molecular sequence/structure analyses. In addition, on-campus facilities available to faculty and students include an electron microscopy center, a large-scale fermentation laboratory, a cell analysis facility for flow cytometry, and a molecular genetics instrumentation laboratory offering automated protein and DNA sequencing, amino acid analysis, oligonucleotide synthesis and peptide synthesis services. The Georgia Marine Institute on Sapelo Island, and the Savannah River Ecology Laboratory are available for environmental studies.

Prospective students should have credit for courses in either calculus or statistics, general genetics, biochemistry, and a year each of inorganic and organic chemistry, with labs. Applicants with otherwise acceptable qualifications may enroll in those courses they lack after admission to our program. No foreign language is required for the master's or doctoral degrees. For teaching assistants, the Test of Spoken English (TSE) is required of all foreign applicants whose native language is not English.

Prospective students should address inquiries to the Graduate Coordinator, Department of Microbiology. Graduate students are normally admitted at the beginning of fall semester, but in special circumstances a student may be admitted at the beginning of any semester. Students whose applications are complete by February 1 will automatically be considered for financial assistance, which usually begins in the fall semester. In addition to several attractive fellowships, assistantships are available for teaching and research. A typical twelve-month stipend ranges from \$10,900 to \$15,511 depending on the degree objective and level of experience. Support for PhD students on

the Microbial Diversity research training grant is also available. All students supported by assistantships receive a waiver of the tuition, except the activity fee and health insurance.

Faculty members are associated with six interdepartmental programs including cell and developmental biology, ecology, genetics, metalloenzymes, microbial diversity, and parasitology. Graduate course offerings in these interdepartmental programs are available to microbiology students and serve to complement the graduate course offerings in microbiology. The listings in biochemistry and molecular biology, biology, botany, chemistry, cellular biology, ecology, genetics, marine sciences, and medical microbiology should be consulted to determine the range of courses available to microbiology majors.

Additional information is also available at our website: <http://www.mib.uga.edu>.

MIBO 4010/6010. Critical Review of Research in Microbiology. 2 hours. Repeatable for maximum 6 hours credit.

Prerequisite: [BCMB(BIOL)(CHEM) 3100 and GENE(BIOL) 3204] or [MIBO 3500 and permission of department].

Corequisite: MIBO 3900 or MIBO 4900L or MIBO 4960H or MIBO 4970H or MIBO 4980H or MIBO 4990H.

Critical analysis and discussion of recent advances in microbiology research through oral presentation. Specific topics may vary but will emphasize molecular biology, physiology, and ecology of prokaryotes. Offered fall, spring, and summer semesters.

(MIBO)FDST 4030/6030-4030L/6030L. Food Microbiology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Interactions of microorganisms with food and the implications of these interactions for food preservation, safety, and fermentations. Pathogenic microorganisms associated with food. Analysis of foods for the presence of microorganisms. Offered fall semester.

MIBO 4090/6090. Prokaryotic Biology. 3 hours.

Prerequisite: MIBO 3500.

Ultrastructure, physiology, genetics, ecology, and phylogeny of bacteria and archaea. Offered spring semester.

(MIBO)CBIO 4100/6100. Immunology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 and GENE(BIOL) 3204.

Immunology from an experimental perspective. Anatomy, development, and function of the immune system. Immune system in infectious diseases. Mechanisms and pathogenesis of immunological disorders. Evolution of immunological concepts. Offered fall semester.

(MIBO)FDST 4120/6120-4120L/6120L. Food Fermentations. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Microbial and technical aspects of dairy, vegetable, meat, grain, and fruit fermentations. Products studied include cheese, sausage, beer, wine, and soy sauce. Offered spring semester.

MIBO 4220/6220. Pathogenic Bacteriology. 3 hours.

Prerequisite: MIBO 3500.

Molecular basis of bacterial virulence: identification of virulence factors, genetic regulation of virulence, and the complex interactions between bacterial pathogens and their hosts. Offered fall semester.

MIBO 4300/6300. Environmental Microbiology and Biotechnology. 3 hours.

Prerequisite: MIBO 3500.

Microorganisms used in biotechnology, agriculture, bioremediation, and industry; distribution, taxonomy, and physiology of environmentally significant microorganisms. Offered spring semester.

(MIBO)(EHSC)FDST 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems. Offered fall semester.

(MIBO)(EHSC)FDST 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations. Offered spring semester.

MIBO 4400L/6400L. Experimental Pathogenic Bacteriology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: MIBO 4220/6220 and GENE(BIOL) 3204 and BCMB(BIOL)(CHEM) 3100.

Bacterial virulence factors and dynamic interactions between bacteria and their hosts. Offered spring semester.

MIBO 4600L/6600L. Microbial Physiology Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite: MIBO 3510L or permission of department.

Experimental design, execution, and interpretation as applied to microbial growth, metabolism, and diversity. Offered spring semester.

(MIBO)CRSS 4610/6610-4610L/6610L. Soil Microbiology. 3 hours. One lecture and two 2-hour lab periods.

Microorganisms in soil and their effect on nutrient recycling, especially as it relates to environmental quality and crop production. Offered every year on a regular basis.

(MIBO)MARS 4620/6620-4620L/6620L. Microbial Ecology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500 or permission of department.

Emphasizes the roles of microorganisms in ecosystems. Nutrient cycles, methods of microbial analysis, and the functional roles of microorganisms. Offered spring semester of even-numbered years.

MIBO 4700/6700-4700L/6700L. Medical Mycology. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: MIBO 3500.

The yeasts, molds, and actinomycetes most likely to be encountered by a medical mycologist in a diagnostic laboratory, with special emphasis on the organisms which are pathogenic for man and other animals. Offered fall semester.

MIBO 4800L/6800L. Microbial Genetics Laboratory. 3 hours. Three 2-hour lab periods.

Prerequisite: (MIBO 3510L and GENE(BIOL) 3204) or permission of department.

Genetic analysis of bacteria, with emphasis on isolating mutants and mapping, characterizing, and cloning genes. Offered fall semester.

(MIBO)ENTO 6670-6670L. Insect Pathogens. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Insect pathology, including history, classification of diseases, insect response to pathogens, normal insect/microbe ecology, and the production and use of insect pathogens for pest control. Offered spring semester of odd-numbered years.

MIBO 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MIBO 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

MIBO 7500. Introductory Microbiology for Teachers. 3 hours.

Not open to students with credit in MIBO 3500.

Prerequisite: BIOL 1108-1108L and CHEM 2211 and CHEM 2211L and BCMB(BIOL)(CHEM) 3100.

Microorganisms, with special emphasis on bacteria, their structure, function, diversity, and importance to man. Specifically for students who plan to teach in some area of microbiology. Offered fall, spring, and summer semesters.

MIBO 7510L. Introductory Microbiology Laboratory for Teachers. 2 hours. One lecture and two 2-hour lab periods.

Not open to students with credit in MIBO 3510L.

Prerequisite: BIOL 1108-1108L and CHEM 2211 and CHEM 2211L and MIBO 7500 and BCMB(BIOL)(CHEM) 3100.

The primary scientific reasoning and laboratory methodology used in microbiology with an emphasis for students who plan to teach in some area of microbiology. Offered fall semester.

MIBO 8100L. Computational Methods in Biology. 3 hours. One lecture and two 2-hour lab periods.

Scientific reasoning and computer methodological skills used in genetic, biochemical, physiological, and ecological research. Offered fall semester.

MIBO 8160. Seminar in Microbiology. 3 hours.

Prerequisite: MIBO 8610.

Techniques involved in effective seminar presentation, including preparation of visual aids, logical development of topic, and delivery. Students present a practice session to the class on an advanced microbiology topic which is videotaped and critiqued, as well as a formal seminar to the department. Offered spring semester.

MIBO 8170. Seminar in Prokaryotic Diversity.

2 hours. Repeatable for maximum 6 hours credit.

Research literature on the diversity of bacteria and archaea, including physiology, genetics, ecology, and taxonomy. Offered spring semester.

(MIBO)MMIB 8200. Pathogenic and Molecular Microbiology. 5 hours.

Prerequisite: MMIB 4220/6220 and BCMB 4020/6020.

Medical pathogens emphasizing molecular techniques. Offered fall semester.

(MIBO)MMIB 8230. Special Topics in Microbial Pathogenesis. 2 hours. Repeatable for maximum 4 hours credit.

Presentation and discussion of published research and new developments in microbial pathogenesis. Offered fall and spring semesters.

(MIBO)(BCMB)CBIO 8520. Topics in Biochemistry and Molecular Genetics of Parasites.

3 hours. Repeatable for maximum 6 hours credit. One lecture and two 1-hour lab periods.

Prerequisite: BCMB 8020 and GENE 8934.

Parasite cellular biochemistry and molecular genetics with potential for rational drug design. Topics include DNA replication, RNA editing, nucleic acid salvage pathways, polyamine metabolism, and glycosylphosphatidylinositol (GPI) anchors. Offered on a regular basis.

MIBO 8600. Fundamental Processes of Prokaryotic Cell Biology. 3 hours.

Biosynthesis of metabolic building blocks (amino acids, nucleotides, fatty acids) and macromolecules (DNA, RNA, proteins, and cell surface structures), environmental regulation, and coordination of these processes with transport and cell division as they occur in key model prokaryotes. Offered spring semester.

MIBO 8610. Prokaryotic Physiology and Diversity. 3 hours.

Physiological aspects of prokaryotic diversity. Principles of bioenergetics; fermentation pathways, including TCA cycle, glycolysis, substrate level phosphorylation, and ion pumps; aerobic and anaerobic respiration; photosynthesis, autotrophy; and aerobic and anaerobic xenobiotic degradation. Offered fall semester.

MIBO 8700. Special Topics in Microbiology.

2 hours. Repeatable for maximum 8 hours credit.

Microbial ecology, diversity, physiology, molecular genetics, biochemistry, or pathogenesis. Specific topic depends on instructor. Offered fall and spring semesters.

MIBO 8900. Research Techniques in Microbiology. 3 hours. Repeatable for maximum 6 hours credit.

Two 3-hour lab periods.

Prerequisite: Permission of department.

Research techniques in microbiology for graduate students in preparation for their thesis/dissertation projects. Offered fall, spring, and summer semesters.

MIBO 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MIBO 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Music

Richard M. Graham, *Head*
Donald R. Lowe, *Graduate Coordinator*,
542-2743
(*Music Building*)

The Master of Music degree is offered in composition, music literature, or performance. Students concentrating in musicology should enroll for the Master of Arts degree. Students desiring fifth-year certification as teachers of music in the public schools should enroll for the Master of Music Education degree offered in cooperation with the College of Education. The MMed degree also offers a concentration in music therapy for students wishing to qualify as registered music therapists.

Students desiring sixth-year certification as teachers of music in the public schools should enroll for the Specialist in Education program (sixth-year program) offered in cooperation with the College of Education.

The Doctor of Education degree with subject matter concentration in music is offered in cooperation with the College of Education.

The Doctor of Musical Arts degree is offered in performance, composition, choral conducting, or music education.

The Doctor of Philosophy degree is offered in music to provide students with opportunities to pursue the research and academic aspects of the discipline at the highest scholarly level.

Some music education courses are listed as EMUS courses in the College of Education section of this bulletin.

MUSI 4100/6100. Tonal Theory and Analysis. 2 hours.
Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Chromatic harmonic analysis and analytical methods. Offered spring semester.

MUSI 4110/6110. Introduction to Counterpoint. 3 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Analysis and composition using sixteenth and eighteenth-century compositional techniques. Offered on a regular basis.

MUSI 4120/6120. Form and Analysis. 3 hours.
Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Analysis of form focusing on music from the seventeenth, eighteenth, and nineteenth centuries. Offered spring semester.

MUSI 4130/6130. Electronic Music Composition I. 3 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Electronic music techniques, focusing on classical and MIDI applications. Offered fall semester.

MUSI 4200/6200. Ancient, Medieval, and Renaissance Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Music from Greek and Roman society to ca. 1600. Offered fall semester of even-numbered years.

MUSI 4210/6210. Music in the Baroque Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Musical styles and forms from Monteverdi through Bach and Handel. Offered fall semester of odd-numbered years.

MUSI 4220/6220. Music in the Classic Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Chamber, orchestral, keyboard, and operatic works from the middle and late eighteenth century. Offered spring semester of odd-numbered years.

MUSI 4230/6230. Music in the Romantic Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Emphasis on the development of song, symphony, chamber music, and opera. Offered spring semester of even-numbered years.

MUSI 4240/6240. Modern Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Modern trends in music from Schoenberg, Stravinsky, Hindemith, and Bartok to the present. Offered spring semester of odd-numbered years.

MUSI 4250/6250. Women and Music. 3 hours.

Prerequisite: (MUSI 3210 and MUSI 3220) or permission of department.

Roles of women in music, including the history of women musicians in western art music, world cultures, and popular music; gender studies in

music. Offered spring semester of even-numbered years.

MUSI 4260/6260. Opera Literature. 2 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Representative operas from the Baroque era to the twentieth century. Offered fall semester of even-numbered years.

MUSI 4270/6270. Non-Western Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Music of non-European cultures, including those of the Far East, Near East, and Africa. Offered spring semester of odd-numbered years.

MUSI 4280/6280. Instrumental/Vocal/Choral Literature. 2 hours.

Prerequisite: (MUSI 3210 and MUSI 3220) or permission of department.

Solo, sonata, and ensemble music composed for winds, brass, strings, piano and harpsichord, organ or voice, dating from the earliest appropriate period to the present. Offered fall, spring, and summer semesters.

MUSI 4730/6730. African American Choral Ensemble. 1 hour. Repeatable for maximum 4 hours credit.

Performance of traditional and contemporary black gospel, spiritual, and popular music. Offered fall and spring semesters.

MUSI 4740/6740. University Symphony Orchestra. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of orchestral literature of various styles and genres. Offered fall and spring semesters.

MUSI 4750/6750. University Chorus. 1 hour. Repeatable for maximum 8 hours credit.

Performance of choral literature for mixed voices from all periods of music history, including sacred, secular, folk, and popular music. Offered fall and spring semesters.

MUSI 4760/6760. Concert Choir. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of choral literature for mixed voices from all periods of music history, including sacred, secular, folk, and popular music. Offered fall and spring semesters.

MUSI 4780/6780. Jazz Bands. 1 hour. Repeatable for maximum 8 hours credit.

Performance of works in a variety of jazz idioms and styles with emphasis on big band jazz. Offered fall and spring semesters.

MUSI 4790/6790. Chamber Music Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Chamber music experiences in variable instrumental categories (percussion, clarinet, trom-

bone, etc.). Offered fall, spring, and summer semesters.

MUSI 4800/6800. Contemporary Chamber Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of modern literature for small and large ensembles. Offered fall and spring semesters.

MUSI 4830/6830. Collegium Musicum. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of early music through the Baroque. Offered fall and spring semesters.

MUSI 4840/6840. Symphonic Wind Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of wind chamber compositions with concentration on advanced scores. Offered fall and spring semesters.

MUSI 5110/7110. Music for Childhood. 3 hours.

Prerequisite: MUSI 3110 and MUSI 3120.

Literature, techniques, and methodologies for teaching children music in a diverse society; a study of children's musical development. Offered fall semester.

MUSI 5120/7120. Teaching Music for Early Childhood Teachers. 3 hours.

Prerequisite: MUSI 3050.

Music teaching techniques, methods, and materials for the early childhood teacher. For education majors only. Offered fall and spring semesters.

MUSI 5130/7130. Early Childhood Musical Development. 3 hours.

Prerequisite: MUSI 3110 and MUSI 3120.

Musical development of children from birth through age eight years emphasizing auditory perception, auditory discrimination, responses of children to music, modes of learning music, and children's acquisition of musical performance skills, and understandings. Offered fall semester.

MUSI 5140/7140. Computer-Assisted Instruction in Music. 2 hours.

Prerequisite: MUSI 2120 and MUSI 2130.

Programming and testing CAI music lessons. Offered summer semester.

MUSI 5260/7260. Marching Band Techniques. 2 hours.

Methods and techniques for organizing and training marching bands; planning music, drills, formations, and shows. Offered spring semester.

MUSI 5270/7270. Advanced Conducting. 2 hours.

Prerequisite: MUSI 3490 or MUSI 3500 or MUSI 3510.

Choral and instrumental conducting methods and techniques with application in laboratory situations. Offered spring semester.

MUSI 5280/7280. Instrumental Techniques. 1 hour. Repeatable for maximum 4 hours credit. Performance techniques and teaching methods for wind, string, and percussion instruments. Offered summer semester.

MUSI 5290/7290. Jazz Piano Improvisation Class. 2 hours. Skills and techniques in keyboard jazz playing based upon a knowledge of modern popular harmonic and notational practices. Offered summer semester.

MUSI 5340/7340. Choral Literature and Performance Practice. 2 hours. Prerequisite: MUSI 3130 and MUSI 3140. Choral music, including multicultural materials, suitable for all levels and voices. Offered fall semester.

MUSI 5350/7350. Instrumental Literature and Performance Practice. 2 hours. Prerequisite: MUSI 3150 and MUSI 3160. Instrumental music, including multicultural materials, suitable for all levels of instruction for band, orchestra, and chamber music. Offered fall semester.

MUSI 5400/7400. Principles of Music Therapy. 2 hours. Music as human behavior and its uses as therapeutic intervention with various populations. Offered fall semester.

MUSI 5410/7410. Psychology of Music. 3 hours. Prerequisite: MUSI 5400/7400. Acoustical and psychological aspects of music with emphasis upon problems of perception, experimental aesthetics, musical function, measurement and diagnosis of musical ability. Offered spring semester.

MUSI 5420/7420. Influence of Music on Behavior. 3 hours. Prerequisite: MUSI 5410/7410. Physiological effects of music, the relation of music to health, and the place of music in the habilitative and rehabilitative process. Offered spring semester.

MUSI 5430/7430. Clinical Experience. 2 hours. Prerequisite: MUSI 5400/7400 or MUSI 5420/7420 or MUSI 5440/7440. Practical application of music therapy in an assigned clinic, along with seminars to analyze effectiveness, in-depth interactions, intervention strategies, and accountability measures. Offered fall, spring, and summer semesters.

MUSI 5440/7440. Music in Recreation. 2 hours. Prerequisite: MUSI 2120 or MUSI 2130 or MUSI 2530 or MUSI 3480.

Methods of song leading and accompanying on the autoharp, guitar, and piano. Offered fall semester.

MUSI 5450/7450. Music for Exceptional Children. 3 hours. Prerequisite: Junior standing and permission of department.

Trends in special education, characteristics and needs of those classified as exceptional, curriculum development, and intervention strategies. Mainstreamed and self-contained settings will be discussed. Offered fall and spring semesters.

MUSI 5730/7730. Electronic Music Composition II. 3 hours. Repeatable for maximum 12 hours credit. Prerequisite: MUSI 4130/6130.

Electronic music compositional techniques, focusing on digital sound recording, sampling, and editing. Students will use highly advanced recording and editing software on a high-speed computer. Offered spring semester.

MUSI 6000. Directed Independent Study. 1-3 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department. Independent research topics directed by a faculty member at the masters level. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

MUSI 6010. Trends and Issues in Music Education. 3 hours. Prerequisite: Permission of department.

Current trends and issues in music education, the historical and social foundations of American music education, music education bibliography, and the role of research in music education. Offered fall and summer semesters.

MUSI 6140. Eighteenth-Century Counterpoint. 3 hours. Prerequisite: MUSI 4110/6110.

Eighteenth-century counterpoint focusing on invention, canon, and fugue in the works of J.S. Bach. Offered fall semester of odd-numbered years.

MUSI 6290. Music History Problems. 3 hours. Western music literature, styles, genres, and composers from the Medieval period to the present day. Offered summer semester.

MUSI 6300. Music Bibliography. 3 hours. Library research, documentation, and writing. Offered fall and summer semesters.

MUSI 7000. Master's Research. 1-3 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department. Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

MUSI 7030. Research in Music Education. 3 hours.

Basic concepts, types, and techniques of research as they apply to music education. Students plan and conduct individual research projects. Offered spring and summer semesters.

MUSI 7300. Master's Thesis. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

MUSI 7320. Problems in Instrumental Music Education. 3 hours.

Prerequisite: MUSI 3120 and MUSI 3150.

Methods and techniques used for development of the instrumental music program, elementary through secondary school; diagnosis of problems relating to strings, woodwinds, brasses, and percussion. Not offered on a regular basis.

MUSI 7330. Music Curriculum and Supervision. 3 hours.

Prerequisite: Permission of department.

Philosophy, design, implementation, and supervision of curriculum for music programs in the public schools. Offered fall semester.

MUSI 7500. Vocal Pedagogy. 2 hours.

Vocal pedagogy in performance and in music education. Offered spring semester.

MUSI 7520. Piano Pedagogy I. 2 hours.

Learning theories, methodologies, and materials. Offered fall semester.

MUSI 7530. Piano Pedagogy II. 2 hours.

Prerequisite: MUSI 7520 or permission of department.

Repertoire, motivation, and related issues of personalities/learning styles. Offered spring semester.

MUSI 7810. Applied Music Instruction. 1-3 hours. Repeatable for maximum 42 hours credit.

Prerequisite: Permission of department.

Applied lessons at the masters level. Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty. Offered fall, spring, and summer semesters.

MUSI 7910. Masters Recital. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Solo or chamber recital in partial fulfillment of requirements for masters degrees. Non-Traditional Format: Recital. Offered fall, spring, and summer semesters.

MUSI 7920. Conducting Project. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Preparation and presentation of masters conducting recital. Non-Traditional Format: Credit varies according to difficulty of literature and level of length of program. Offered fall, spring, and summer semesters.

MUSI 8000. Practicum in Music Education. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Supervised professional work experience with an educational institution, musical organization, or arts agency. Offered fall and spring semesters.

MUSI 8010. Directed Independent Study. 1-3 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Independent research topics directed by a faculty member at the doctoral level. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

MUSI 8030. Research in Music Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: MUSI 7030 or permission of department.

Students plan and conduct group and individual projects. Offered fall semester.

MUSI 8040. Score Analysis I. 3 hours.

Prerequisite: Permission of department.

Score preparation and study with emphasis on the conductor's point of view. Literature will be chosen from Medieval through Baroque periods. Offered fall semester.

MUSI 8050. Score Analysis II. 3 hours.

Prerequisite: MUSI 8040 or permission of department.

Score preparation and study with emphasis on the conductor's point of view. Literature will be chosen from the Classic period to the present. Offered spring semester.

MUSI 8060. Music in Higher Education. 2 hours. History and development of music in higher education in the United States and the mission, function, and operation of music units within a college or university setting. Offered spring semester.

MUSI 8070. Music Education Problems. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MUSI 7330 or permission of department.

Basic principles and current thought in music education. Offered summer semester.

MUSI 8080. Pedagogy of Music. 3 hours.

Principles and practices of music instruction, including learning theory, curriculum design, and systems of evaluation. Not offered on a regular basis.

MUSI 8090. Psychology of Music. 3 hours.

Experimental findings and research methods in psychology of music. Offered spring semester.

MUSI 8100. History of Music Theory. 3 hours.

Prerequisite: MUSI 4050.

Issues in music theory from Pythagorus to the present, with emphasis on Medieval and Renaissance theorists. Offered fall semester of odd-numbered years.

MUSI 8110. Contemporary Trends in Music Theory I. 3 hours.

Prerequisite: MUSI 4050.

Chromatic tonal theory and analysis. Late and post-romantic composers (Wagner, Mahler, Strauss, and Schoenberg) involving current applications of typical harmonic and Schenkerian graphic analysis. Offered spring semester of odd-numbered years.

MUSI 8120. Contemporary Trends in Music Theory II. 3 hours.

Prerequisite: MUSI 4050.

Analytical methods and models for modern and contemporary music. The primary foci for the course will be pitch- class set analysis, twelve-tone theory, and more recent theories. Offered spring semester of even-numbered years.

MUSI 8130. Special Topics in Music Theory.

3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: MUSI 4050.

Changing series of topics, including pedagogy of music theory. Offered fall semester of odd-numbered years.

MUSI 8300. Special Studies in Keyboard Literature.

2 hours. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Keyboard music of selected composers, single genres, or specific national schools. Offered spring semester of even-numbered years.

MUSI 8310. Special Topics in Musicology.

3 hours. Repeatable for maximum 12 hours credit.

Changing topics, such as individual composers, music notation, and special research areas. Offered fall and spring semesters.

MUSI 8320. Chamber Music Literature. 3 hours.

Major chamber music works from the Italian trio sonata to the present day. Offered fall semester of even-numbered years.

MUSI 8330. Performance Practice. 3 hours.

Performance practice in a variety of style periods involving treatises, scores, and recordings. Offered spring semester of odd-numbered years.

MUSI 8340. American Music. 3 hours.

Art music and vernacular traditions of the United States. Offered spring semester of even-numbered years.

MUSI 8350. Musicology Proseminar. 3 hours.

Repeatable for maximum 9 hours credit.

Research seminar in musicology; topics based upon current trends in musicological research. Offered spring semester of even-numbered years.

MUSI 8810. Applied Music Instruction. 1-3 hours.

Repeatable for maximum 27 hours credit.

Prerequisite: Permission of department.

Applied music instruction at the doctoral level. Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty. Offered fall, spring, and summer semesters.

MUSI 8910. Doctoral Recital. 1-3 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Solo, chamber, or lecture recital in partial fulfillment of requirements for the doctoral degree. Non-Traditional Format: Credit varies according to difficulty of literature and length of program. Offered fall, spring, and summer semesters.

MUSI 8920. Doctoral Conducting Project.

1-3 hours. Repeatable for maximum 12 hours credit.

Preparation and presentation of doctoral conducting recital. Non-Traditional Format: Credit varies according to difficulty of literature and level of length of program. Offered fall, spring, and summer semesters.

MUSI 8990. Doctoral Seminar. 1 hour.

Repeatable for maximum 6 hours credit.

Seminar on a variety of topics of interest to music doctoral students. Offered fall and spring semesters.

MUSI 9000. Doctoral Research. 1-10 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MUSI 9300. Doctoral Dissertation. 1-12 hours.

Repeatable for maximum 33 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral

dissertation. Offered fall, spring, and summer semesters.

Philosophy

Donald E. Nute, Jr., *Head*
Charles B. Cross, *Graduate Coordinator*,
542-2653
(Peabody Hall)

The department offers a comprehensive program, covering the major areas of philosophical study, leading to the MA and the PhD degrees. Various approaches, including historical studies, linguistic analysis, logical analysis, and phenomenology are represented by the faculty. Though the department allows students to pursue their own interests in diverse areas, our special strengths lie in metaphysics, moral and political philosophy, and theory of knowledge and philosophy of mind. The graduate program is designed to give broad and thorough training in these basic areas of philosophy, as well as the opportunity for special study in the area of specialization of interest to the student. Admission to the PhD program presupposes a thorough background in the history of philosophy. Restricted admission encourages close student-faculty relationships. Preparation for teaching is considered an integral part of the PhD program.

For the MA degree, reading knowledge of one foreign language is required; for the PhD, one foreign language is required and a second language and/or knowledge of areas cognate to philosophy may be required.

Additional information about the department can be found on our web site: <http://www.phil.uga.edu>.

PHIL 4000/6000. Plato. 3 hours.

Prerequisite: PHIL 3000.

The major writings of Plato. Offered every even-numbered year on a regular basis.

PHIL 4010/6010. Aristotle. 3 hours.

Prerequisite: PHIL 3000.

The major writings of Aristotle. Offered fall semester; offered spring semester of even-numbered years.

PHIL 4020/6020. Medieval Philosophy. 3 hours.
Prerequisite: PHIL 3000.

The major figures of the medieval period in western philosophy, including Augustine and Aquinas. Offered every odd-numbered year on a regular basis.

PHIL 4030/6030. Continental Rationalism. 3 hours.

Prerequisite: PHIL 3010.

Continental Rationalism, focusing on evaluating the principal writings of Descartes, Spinoza, and Leibniz. Offered every even-numbered year on a regular basis.

PHIL 4040/6040. British Empiricism. 3 hours.

Prerequisite: PHIL 3010.

British Empiricism, focusing on evaluating the principal writings of Locke, Berkeley, and Hume. Offered every odd-numbered year on a regular basis.

PHIL 4050/6050. Kant. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.

The major writings of Immanuel Kant. Offered every even-numbered year on a regular basis.

PHIL 4060/6060. Hegel. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.

The major writings of G.W.F. Hegel. Offered on a regular basis.

PHIL 4070/6070. Nineteenth-Century European Philosophy. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.

Works of some major nineteenth-century philosophers, typically organized around a theme. Philosophers to be studied may include Mill, Bentham, Frege, Brentano, Schopenhauer, Fichte, Schelling, and Nietzsche. Offered every even-numbered year on a regular basis.

PHIL 4080/6080. Classical American Philosophy. 3 hours.

Prerequisite: Permission of department.

The major writings of C.S. Pierce, William James, and John Dewey and their influence on the development of contemporary philosophy. Offered every odd-numbered year on a regular basis.

PHIL 4090/6090. Contemporary Continental Tradition. 3 hours.

Prerequisite: PHIL 3000 or PHIL 3010 or PHIL 3030.

Writings from the early phenomenologists, existentialists, contemporary Marxists and their successors, such as Husserl, Heidegger, Merleau-Ponty, Camus, Sartre, Marcuse, and Habermas. Offered every odd-numbered year on a regular basis.

PHIL 4100/6100. Contemporary Analytic Tradition. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3600 or PHIL 3610.

The development of contemporary analytical philosophy from the turn of the century to the present. Readings will be from philosophers such as

Russell, Moore, Wittgenstein, Carnap, Ryle, Austin, Quine, and Strawson. Offered every odd-numbered year on a regular basis.

PHIL 4210/6210. Social and Political Philosophy. 3 hours.

Prerequisite: PHIL 2200.

The nature and function of society and the state, human freedom and rights, and the bases of social and political obligations. Offered every odd-numbered year on a regular basis.

PHIL(EETH) 4220/6220. Environmental Ethics. 3 hours.

Prerequisite: PHIL 2200 or permission of department.

Major professional and nonprofessional writings in the field of environmental ethics. Offered fall semester.

PHIL 4230/6230. Aesthetics. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

Philosophical theories about the arts; for example, painting, literature, and music. Questions to be addressed include: what makes art art? and what are appropriate criteria of good art? Attention may also be given to such topics as the function of art in society. Offered every even-numbered year on a regular basis.

PHIL 4240/6240. Philosophy of Law. 3 hours.

Prerequisite: Permission of department.

The nature and function of law, with emphasis on the interpretation and application of the law in the judicial process. Readings in classical and contemporary schools of the philosophy of law. Offered every odd-numbered year on a regular basis.

PHIL(EETH) 4250/6250. Technology and Values. 3 hours.

Prerequisite: Permission of department.

Technology in its broadest human context, with emphasis on the mutual influence between means and ends and the impact of technology on shaping the beliefs and attitudes of a civilization. Includes alternative assessments of technology and illustrates with specific crucial issues of our time. Offered spring semester of even-numbered years.

PHIL(LING) 4300/6300. Philosophy of Language. 3 hours.

Prerequisite: Permission of department.

Topics such as formal and ordinary languages, meaning, reference, truth, definition, analyticity, ambiguity, metaphor, symbolism, and the uses of language. Offered every even-numbered year on a regular basis.

PHIL 4310/6310. Philosophy of Mind. 3 hours.

Prerequisite: PHIL 3000 or PHIL 3010 or PHIL 3020 or PHIL 3610.

The philosophical implications of alternative approaches to psychology such as the behavioral, the psychoanalytic, the phenomenological, with particular attention to such problematic areas as the nature and validation of psychological concepts, law, and theories, and the knowledge of other minds. Offered every odd-numbered year on a regular basis.

PHIL 4400/6400. History of Natural Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2400.

Major physical, biological, and cosmological theories and their philosophic import, sixth century B.C. to the present. Offered every even-numbered year on a regular basis.

PHIL 4410/6410. Philosophy of Natural Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2400.

The logical structure of scientific hypotheses and/or laws, and the problems of their meaning and confirmation; the general patterns of scientific explanation; and the ideals of prediction and control. Offered every even-numbered year on a regular basis.

PHIL 4420/6420. Philosophy of Social Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

The methods and problems of inductive reasoning, including the nature of probable inference, techniques of verification, and the structure of scientific explanation, with special reference to the social sciences. Offered every odd-numbered year on a regular basis.

(PHIL)RELI 4500/6500. Philosophy of Religion. 3 hours.

Prerequisite: RELI 1003 or PHIL 1000 or PHIL 2200 or PHIL 2400.

The meaning, nature, and validity of religious discourse, beliefs, and practices, involving theories concerning the existence and nature of God and humanity's relation to God. Not offered on a regular basis.

PHIL(LING) 4510/6510. Deductive Systems. 3 hours.

Prerequisite: PHIL 2500.

Symbolic-mathematical logic, examining the propositional and predicate calculi, with emphasis on problems in translation and formalization and topics in the philosophy of logic and mathematics. Offered fall semester.

PHIL(LING) 4520/6520. Model Theory. 3 hours.

Prerequisite: PHIL(LING) 4510/6510.

Formal semantics for sentential and first-order predicate logic, including both soundness and completeness results for first-order logic. Additional topics may include Goedel's incompleteness results, the Skolem-Lowenheim theorem, or

possible world semantics for modal logics. Offered spring semester of even-numbered years.

PHIL 4530/6530. Philosophy of Mathematics. 3 hours.

Prerequisite: (PHIL 1000 or PHIL 2400) and PHIL 2500.

The philosophical issues associated with mathematical inquiry, including, perhaps, the existence and nature of mathematical objects, the epistemology of mathematical truths, the character of mathematical proof, and the foundations of mathematics. Offered spring semester of odd-numbered years.

(PHIL)CSCI 4550/6550. Artificial Intelligence. 3 hours.

Prerequisite: CSCI 1302 or [PHIL 2500 and (PHIL 3010 or PHIL 3020 or PHIL 3610)] or permission of department.

Prerequisite or corequisite: CSCI(ARTI) 4540/6540.

The artificial intelligence approach to modeling cognitive processes. Topics include an introduction to heuristic methods, problem representation and search methods, classic AI techniques, and a review of the controversial issues of the AI paradigm of cognition as computation. Offered fall semester.

(PHIL)HIST 4860/6860. History, History of Philosophy, Philosophy. 3 hours.

Historians and philosophers differ in the source of evidence and arguments they use and in the standards to which they appeal. Nonetheless, works in each of these fields raise questions relevant to the other field. The purpose of this course is to explore the main relationships between these two fields. Offered on a regular basis.

PHIL 7000. Master's Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHIL 7010. Teaching Philosophy. 1 hour. One 2-hour lab period.

Materials, techniques, and objectives for teaching undergraduate courses in philosophy. Particular attention to presenting lectures, leading discussions, constructing examinations, and instructional evaluations. Offered fall semester.

PHIL 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent

research and thesis preparation. Offered fall, spring, and summer semesters.

PHIL 8000. Seminar in History of Philosophy. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Philosophical topics and problems as found in the works of ancient, medieval, and modern philosophers. Offered every year on a regular basis.

PHIL 8200. Seminar in Ethics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Problems and topics in classical and contemporary moral philosophy. Offered every year on a regular basis.

PHIL 8210. Seminar in Political Philosophy. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Problems and topics in classical and contemporary political philosophy. Offered every year on a regular basis.

PHIL(LING) 8300. Seminar in the Philosophy of Language. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

The original course materials dealing with such topics as formal and ordinary languages, meaning, reference, descriptions, truth, definition, analyticity, speech acts, and the uses of language. Offered every odd-numbered year on a regular basis.

PHIL 8310. Seminar in the Philosophy of Mind. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

One or more central problems in the philosophy of mind such as the mind-body problem, intentionality, and mental causation. Offered every even-numbered year on a regular basis.

PHIL 8400. Seminar in Philosophy of Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Basic concepts in science, such as explanation, description, prediction, law, cause, theory, confirmation, probability, observation, and measurement. Offered every odd-numbered year on a regular basis.

PHIL 8500. Seminar in Problems of Logic. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PHIL(LING) 4510/6510.

Modal logic, epistemic logic, temporal logic, conditional logic, nonmonotonic logic, the problem of induction, and the logic of belief revision. Offered every odd-numbered year on a regular basis.

PHIL 8600. Seminar in Metaphysics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Various metaphysical systems and related problems. Offered every year on a regular basis.

PHIL 8610. Seminar in Epistemology. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Various theories of knowledge and related problems. Offered every year on a regular basis.

PHIL(RELI) 8630. Seminar in Philosophy of Religion. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Major topics in the philosophy of religion, such as the nature and existence of God, the problem of evil, and the character of religious discourse. Offered every even-numbered year on a regular basis.

(PHIL)CSCI 8650. Logic and Logic Programming. 4 hours.

Prerequisite: [CSCI(ARTI) 4540/6540 and PHIL (LING) 6430] or permission of department. Theoretical foundations of automated reasoning and logic programming. Topics covered include propositional logic, predicate logic, first-order models, resolution principles, logic programming paradigms, nonmonotonic reasoning. Offered spring semester of even-numbered years.

PHIL 8700. Problems and Topics in Philosophy. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Philosophical positions and problems. Offered every even-numbered year on a regular basis.

PHIL 8800. Readings and Research in Special Problems in Philosophy. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Directed reading and research in philosophy in areas of a student's special interest. Non-Traditional Format: An independent research course. Each student meets individually with a faculty supervisor on a weekly basis to discuss the progress of his/her research project. Offered fall, spring, and summer semesters.

PHIL 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHIL 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Physics and Astronomy

F. Todd Baker, *Head*
Jean-Pierre Caillault, *Graduate*
Coordinator, 542-2818
(Physics Building)

The Department of Physics and Astronomy offers graduate work leading to the MS and PhD degrees in physics. The major research in the department is conducted in the following fields: astrophysics, atomic and molecular physics, nuclear physics, condensed matter physics, statistical mechanics, optics, relativity, high energy physics, mathematical physics, and physical oceanography. Experimental research is conducted in on-campus laboratories for atomic and molecular physics, laser spectroscopy of solids, material synthesis and physical oceanography. Research involving the application of computer simulational techniques to condensed matter physics, material science, and high energy physics is conducted at the Center for Simulational Physics. Experimental research in intermediate-energy nuclear physics is performed at off-campus accelerator laboratories in the U.S., France, Canada, and Japan. Astronomical research is conducted with the facilities of the National Radio and Optical Observatories, and those of NASA. Research in the above areas is aided by the campus computing facilities.

Prospective students desiring financial aid should submit all application material by February 15. No foreign language is required for the master's or doctoral degrees.

Physics

PHYS 4000/6000. Physics Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Discussion of contemporary topics in physics. Offered fall and spring semesters.

PHYS 4101/6101. Theoretical Mechanics I. 3 hours.

Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L).

Prerequisite or corequisite: MATH 2700.

Kinematics and dynamics of a particle and of systems of particles. Offered spring semester.

PHYS 4102/6102. Theoretical Mechanics II. 3 hours.

Prerequisite: PHYS 4101/6101.

Mechanics of continuous media. Formal developments in mechanics including the formulations of Lagrange and Hamilton. Offered fall semester.

PHYS 4201/6201. Electricity and Magnetism I. 3 hours.

Prerequisite: PHYS 4101/6101.

Experimental foundations, including development of Maxwell's equations. Offered fall semester.

PHYS 4202/6202. Electricity and Magnetism II. 3 hours.

Prerequisite: PHYS 4201/6201.

Applications of Maxwell's equations. Offered spring semester.

PHYS 4300/6300. Thermodynamics and Kinetic Theory. 3 hours.

Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L) and MATH 2700.

The laws of thermodynamics and their application to physical systems. Kinetic theory. Offered spring semester.

PHYS 4701/6701. Introductory Quantum Mechanics I. 3 hours.

Prerequisite: PHYS 3700 and PHYS 4101/6101.

Fundamental principles of quantum mechanics. Solutions of the Schrodinger equation and their properties for simple systems are discussed. Offered fall semester.

PHYS 4702/6702. Introductory Quantum Mechanics II. 3 hours.

Prerequisite: PHYS 4701/6701.

Perturbation theory and applications of quantum mechanics. Offered spring semester.

PHYS 4750/6750. Nuclear and Particle Physics. 3 hours.

Prerequisite: PHYS 3700.

Properties of nuclear and subnuclear systems. Fundamental interactions between particles are treated. An introduction to the theory of the structure of baryons, mesons, and nuclei is presented along with quarks and the standard model. Not offered on a regular basis.

PHYS 4820/6820. Condensed Matter Physics. 3 hours.

Prerequisite: PHYS 3700 and PHYS 4300/6300.

Elastic, thermal, electrical, magnetic and optical properties of condensed matter. Covers such topics as crystal structure, symmetry operators, X-ray and neutron diffraction, lattice vibrations, thermal properties, electrons in metals and semiconductors, dielectric and optical properties, magnetism and magnetic resonance, superconductivity, and quantum fluids. Not offered on a regular basis.

PHYS 6670L. Experimental Physics. 3 hours. Two 3-hour lab periods.

Prerequisite: PHYS 4701/6701.

Laboratory course in which the student uses modern experimental techniques to investigate phenomena in atomic, molecular, nuclear, and solid state physics. Offered spring semester.

PHYS 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHYS 7111-7111L. Introductory Physics for Teachers - Mechanics, Waves, Thermodynamics. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: MATH 1090 or MATH 1113.

This course is designed to aid the introductory physics teacher in dealing with problems in mechanics, waves, and thermodynamics which arise in his/her teaching. The effective presentation of physical concepts in this area will be emphasized. Credit is limited to students working for degrees in education. Offered fall, spring, and summer semesters.

PHYS 7112-7112L. Introductory Physics for Teachers - Electricity and Magnetism, Optics, Modern Physics. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: PHYS 7111-7111L.

This course is designed to aid the introductory physics teacher in dealing with problems in electricity and magnetism, optics, and nuclear physics which arise in his/her teaching. The effective presentation of physical concepts in this area will be emphasized. Credit is limited to students working for degrees in education. Offered fall, spring, and summer semesters.

PHYS 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PHYS 8011. Classical Mechanics I. 3 hours.

Prerequisite: PHYS 4102/6102.

Corequisite: PHYS 8401.

The mechanics of particles and rigid bodies is developed using generalized coordinates, D'Alembert's principle and Hamilton's principle. Symmetry principles and conservation laws are emphasized. Offered fall semester.

PHYS 8012. Classical Mechanics II. 3 hours.

Prerequisite: PHYS 8011.

Corequisite: PHYS 8401.

The mechanics of small oscillations and continuous media is developed using Hamilton's principle. Other topics covered include: special relativity, Hamilton's equations of motion, canonical transformations, Hamilton-Jacobi Theory and an introduction to non-linear systems. Offered spring semester.

PHYS 8101. Quantum Mechanics I. 3 hours.

Prerequisite: PHYS 4702/6702 and PHYS 8012 and PHYS 8402.

The basic principles of quantum mechanics and their applications to problems in modern physics. Topics covered include principles of wave mechanics, central forces and angular momentum, three dimensional bound state problems and scattering theory, spin. Offered fall semester.

PHYS 8102. Quantum Mechanics II. 3 hours.

Prerequisite: PHYS 8101.

The basic principles of quantum mechanics and their applications to problems in modern physics. Topics covered include quantum dynamics, identical particles, symmetries, time-independent and time-dependent perturbation theory. Offered spring semester.

PHYS 8150. Advanced Quantum Theory. 3 hours.

Prerequisite: PHYS 8102.

Relativistic quantum mechanics and quantum field theory. Not offered on a regular basis.

PHYS 8171. Quantum Theory of Scattering with Applications I. 3 hours.

Prerequisite: PHYS 8102.

Concepts and applications of potential scattering. Both short-range and long-range potentials are treated. Not offered on a regular basis.

PHYS 8172. Quantum Theory of Scattering with Applications II. 3 hours.

Prerequisite: PHYS 8171.

Scattering and reactions involving identical particles and composite systems. Elastic, inelastic, and rearrangement processes are treated. Not offered on a regular basis.

PHYS 8201. Advanced Electromagnetic Theory I. 3 hours.

Prerequisite: PHYS 4202/6202 and PHYS 8402.

A study of classical electrodynamics. Topics include development of Maxwell's electromagnetic field equations and the Lorentz force equation, electrostatics and magnetostatics. Offered fall semester.

PHYS 8202. Advanced Electromagnetic Theory II. 3 hours.

Prerequisite: PHYS 8201.

A study of classical electrodynamics. Topics include development of Maxwell's electromagnetic field equations and the Lorentz force equation, electrostatics and magnetostatics, time-varying

fields, conservation laws, radiating systems, and electromagnetic waves. Offered spring semester.

PHYS 8251. Relativity I. 3 hours.

Prerequisite: Permission of department.

Einstein's general theory of relativity. Topics include mathematical background, fundamental field equations of Einstein's theory of gravitation and their phenomenological extension to include electromagnetic phenomena. Not offered on a regular basis.

PHYS 8252. Relativity II. 3 hours.

Prerequisite: Permission of department.

Einstein's general theory of relativity. Topics include fundamental field equations of Einstein's theory of the total field, particle structure and motion in general relativistic theories, experimental and observational tests of the theories. Not offered on a regular basis.

PHYS 8301. Statistical Mechanics I. 3 hours.

Prerequisite: PHYS 8102.

The foundation and development of statistical mechanics in classical and quantum physics and its relationship to thermodynamics. Not offered on a regular basis.

PHYS 8302. Statistical Mechanics II. 3 hours.

Prerequisite: PHYS 8301.

Applications of statistical mechanics to some fundamental problems in physics, astrophysics and other sciences. Not offered on a regular basis.

PHYS 8321. Advanced Statistical Mechanics I. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PHYS 8302 or permission of department.

Advanced topics in statistical mechanics, especially those which have contributed to recent rapid progress in the modern many-body problem. Analytical and other advanced mathematical techniques will be emphasized. Not offered on a regular basis.

PHYS 8322. Advanced Statistical Mechanics II. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PHYS 8302 or permission of department.

Recent topics in advanced statistical mechanics of special significance. Special mathematical techniques such as matrix polynomials and diagonalization, transfer matrix method and mapping, chaotic dynamical systems, elliptical integrals will be discussed in detail. Not offered on a regular basis.

PHYS 8401. Methods of Mathematical Physics I. 3 hours.

Prerequisite: MATH 2700.

Treatment of mathematical methods necessary for solving problems in physics. Techniques from complex analysis, integral transforms, linear vector spaces and ordinary differential equations are covered. Offered fall semester.

PHYS 8402. Methods of Mathematical Physics II. 3 hours.

Prerequisite: PHYS 8401.

Treatment of mathematical methods necessary for solving problems in physics. Techniques from special functions, partial differential equations, Green's functions and the calculus of variations are developed and applied. Offered spring semester.

PHYS 8501. Structure and Spectra of Atoms and Molecules I. 3 hours.

Prerequisite: PHYS 8102.

Atomic and molecular physics with emphasis on current research in the structure and spectra of atomic systems, especially non-relativistic descriptions. Not offered on a regular basis.

PHYS 8502. Structure and Spectra of Atoms and Molecules II. 3 hours.

Prerequisite: PHYS 8501.

Atomic and molecular physics with emphasis on current research in the structure and spectra of molecular systems, and relativistic descriptions of atoms and molecules. Not offered on a regular basis.

PHYS 8601. Computer Simulation Methods in Physics. 3 hours. Two lectures and two 2-hour lab periods.

Prerequisite: PHYS 4300/6300 or permission of department.

The use of computer simulation methods to treat otherwise intractable problems. Emphasis will be placed on many-body problems and the techniques will include Monte Carlo and spin dynamics. Not offered on a regular basis.

PHYS 8602. Computer Simulations of Materials. 3 hours. Two lectures and two 2-hour lab periods.

Prerequisite: PHYS 8601 or permission of department.

Computer simulation algorithms including molecular dynamics and quantum molecular dynamics techniques. Student must write programs and analyze data for different ensembles. Not offered on a regular basis.

PHYS 8730. Nuclear Theory. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PHYS 8102.

Analysis of symmetry principles, nuclear forces, nuclear shell model, nuclear and nucleon structure and nucleonic degrees of freedom. Not offered on a regular basis.

PHYS 8821. Advanced Solid State Physics I. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PHYS 8301.

Quantum theory of solids. Current and fundamental topics in solid state physics, including the theory of electrons and phonons in metals, semi-

conductors and insulators, will be covered. Not offered on a regular basis.

PHYS 8822. Advanced Solid State Physics II. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PHYS 8821.

Quantum theory of solids. Current and fundamental topics in solid state physics, including magnetism, optical and transport properties of solids and superconductivity, will be covered. Not offered on a regular basis.

PHYS 8900. Advanced Topics. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Current and advanced topics in physics and astronomy. Non-Traditional Format: Lecture/discussion hours will vary depending on the particular faculty member presenting the course. Not offered on a regular basis.

PHYS 8990. Introduction to Research. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Active research areas in physics and astronomy provided by faculty members who are actively engaged in research. Offered fall, spring, and summer semesters.

PHYS 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHYS 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Astronomy

ASTR 4010/6010. Astrophysics I. 3 hours.

Prerequisite: ASTR 1010 and ASTR 1020 and PHYS 3700 and PHYS 4101/6101.

Stellar astrophysics, stellar structure and atmospheres, formation of spectral lines and spectral classification, stellar evolution from star formation to planetary nebulae and supernovae and the resulting compact objects. Offered fall semester of odd-numbered years.

ASTR 4020/6020. Astrophysics II. 3 hours.

Prerequisite: ASTR 4010/6010.

Systems of stars, the interstellar medium and stellar populations, galaxies, their classification

and evolution, extragalactic astronomy and cosmology. Offered spring semester of odd-numbered years.

ASTR 4330/6330. Astronomy Seminar. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: ASTR 1010 and ASTR 1020.

Prerequisite or corequisite: ASTR 3010 or ASTR 3020 or ASTR 4010/6010 or ASTR 4020/6020.

Seminar on contemporary topics in astronomy and astrophysics. Offered fall and spring semesters.

ASTR 8070. Stellar Structure and Evolution. 3 hours.

Prerequisite: MATH 2700 and PHYS 4101/6101 and PHYS 4201/6201 and PHYS 4701/6701.

Prerequisite or corequisite: PHYS 4202/6202 or PHYS 4702/6702.

The internal structure and evolution of single and binary stars from formation to supernova. The equations of stellar structure and their numerical solution are discussed. Recent developments in stellar evolution theory, including brown dwarfs and extrasolar giant planets are presented. Not offered on a regular basis.

ASTR 8080. Stellar Atmospheres. 3 hours.

Prerequisite: ASTR 8070.

The atmospheres of stars and giant planets, the equation of state, the transfer of radiation in stellar atmospheres, and the interaction of radiation and matter. The equations of stellar atmospheres and their numerical solution are derived and results of modern calculations are presented. Recent developments in stellar atmosphere theory, including brown dwarfs and extrasolar giant planets. Not offered on a regular basis.

ASTR 8090. The Interstellar Medium. 3 hours.

Prerequisite: MATH 2700 and PHYS 4101/6101 and PHYS 4202/6202 and PHYS 4702/6702.

Physical processes and phenomena in the interstellar medium including radiative processes; excitation, ionization, and dissociation of atoms and molecules; neutral hydrogen and galactic structure; equilibrium conditions in clouds; interactions of dust with gas and radiation; HII regions; molecular clouds; star formation; planetary nebulae; supernova remnants; cosmic rays and the galactic magnetic field. Not offered on a regular basis.

ASTR 8110. Graduate Astronomy Seminar. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Professional skills such as writing and reviewing research and observing proposals, writing and refereeing research papers, making oral presentations of their research and of journal articles, and writing brief newspaper and magazine summaries. Not offered on a regular basis.

ASTR 8270. Extragalactic Astronomy and Observational Cosmology. 3 hours.

Prerequisite: MATH 2700 and PHYS 4101/6101 and PHYS 4202/6202 and PHYS 4702/6702.

Stellar content and dynamics of external galaxies, galaxy types and their evolution, Active Galactic Nuclei and quasars. Topics to be discussed include the extragalactic distance scale, clusters of galaxies, large-scale structure, cosmological models incorporating the microwave background, the early universe and galaxy formation. Not offered on a regular basis.

Political Science

Thomas P. Lauth, *Head*

Brad Lockerbie, *Graduate Coordinator*
(MA, PhD), 542-2932

Jerome S. Legge, Jr., *Graduate*
Coordinator (MPA, DPA), 542-2932
(Baldwin Hall)

The Department of Political Science offers programs leading to MA, MPA, PhD, and DPA degrees. The MA and PhD programs are oriented to the systematic study and analysis of political phenomena. For the PhD program, candidates are required to complete three courses in research methods and statistics offered within the department. They choose three fields from the seven offered for comprehensive examinations. These include: American politics; public administration; public policy; political theory; comparative politics; international relations; and law, courts, and the judicial process.

The purpose of the Master of Public Administration degree is to educate individuals for administrative and managerial careers in government. It is designed for those planning to enter or who are already a part of the public service. The Doctor of Public Administration program offers a research degree designed for students interested in academic or public service careers. For further information, our e-mail address is polgrad@uga.cc.uga.edu.

POLS 4370/6370. Politics of Industrialized Democracies. 3 hours.

Not open to students with credit in POLS 4370H. Prerequisite: POLS 1101-1101D.

The political economy, institutions, and cultures of the major capitalist countries in Europe, East Asia, and North America. State-society relations and formal and informal political institutions, such as political parties, interest groups, electoral systems, and democratic representation. Course may be taken through UGA Studies Abroad program in Verona, Oxford. Not offered on a regular basis.

POLS 4520/6520. Electoral Behavior. 3 hours.
Prerequisite: POLS 1101-1101D.

Factors which contribute to electoral choice and the dynamics of voting in the American political system. Not offered on a regular basis.

POLS 4610/6610. The United States Presidency. 3 hours.
Prerequisite: POLS 1101-1101D.

The president of the United States, including the president's constitutional position, theories of executive dominance and executive privilege, the president's attempt to control the executive branch, and presidential-congressional relations. Not offered on a regular basis.

POLS 6000. American Political Thought. 3 hours.

Ideas about human nature and government that have shaped political practice and debate in America. The principles of the Declaration of Independence and the Constitution as developed especially by Jefferson, Madison, and Hamilton, and the interpretation of these principles by such statesmen as Lincoln and Wilson. Other topics include Black political thought and current liberal-conservative debate. Not offered on a regular basis.

POLS 6020. Political Philosophy: Hobbes to the Twentieth Century. 3 hours.

Development of modern political philosophy through the analysis of selected works of such writers as Hobbes, Locke, Hume, Rousseau, Mill, Marx, and Nietzsche. Not offered on a regular basis.

POLS 6040. Problems in Democratic Theory. 3 hours.

Major problems that arise in theoretical discussions of democracy, such as the nature of democratic government, its purposes, its justification, its limitations, and the conditions necessary for its maintenance. Not offered on a regular basis.

POLS 6100. Pre-Seminar in American Politics. 3 hours.

The study of American politics. Recommended for students considering advanced work in the field. Offered every year on a regular basis.

POLS 6140. The Legislative Process. 3 hours.

The United States Congress with emphasis on recruitment and composition of leadership, procedures, and the role of parties and interest

groups. Recent changes in the Congress will be examined in light of theories of representation. Not offered on a regular basis.

POLS 6170. American Political Parties. 3 hours.

Research on political parties in the United States, with an emphasis on empirical analysis and theories of parties. Not offered on a regular basis.

POLS 6200. Pre-Seminar in International Relations. 3 hours.

Realist, idealist, and institutionalist approaches to the study of International Relations. Special emphasis on applications to both historical and contemporary cases. Not offered on a regular basis.

POLS 6210. International Organization. 3 hours.

The role of international institutions to overcome obstacles of international cooperation. International regimes, formal as well as informal, and their capacity to induce cooperation. International regimes are understood as political institutions designed to solve collective action problems and reduce transaction costs among states to such degrees that international cooperation becomes possible. Not offered on a regular basis.

POLS 6220. International Law. 3 hours.

Functioning of the legal structures in the international system with special emphasis on the relation between law and politics. Not offered on a regular basis.

POLS 6230. International Conflict. 3 hours.

Major theories of international conflict. The objective is to explore the logical and empirical foundations for the key hypotheses linking systemic, structural, coalitional, and individual factors to decisions regarding war and peace. Also, introduces the different types of methodologies currently used in the quantitative study of international relations. Not offered on a regular basis.

POLS 6240. International Political Economy. 3 hours.

Various aspects of the international economy, both theoretical and practical, essential to an understanding of modern diplomacy and the conduct of foreign affairs. Not offered on a regular basis.

POLS 6250. American Foreign Policy. 3 hours.

History and content of American foreign policy as well as the foreign policy making process. Special emphasis on the role of individuals and non-government organizations in making foreign policy in a mature democracy. Not offered on a regular basis.

POLS 6350. Comparative Analysis and Method. 3 hours.

Comparative approaches to political science. The transition from feudalism to capitalism, state building, and the interaction between political in-

stitutions and cultures in various polities. Methods and approaches investigated include structuralism, functionalism, culturalist perspectives, rational choice, institutionalist frameworks, and the perennial issue of what constitutes the "state." Not offered on a regular basis.

POLS 6380. Russian and East European Politics. 3 hours.

Domestic and international politics in Russia and selected East European states (e.g., Belarus and Ukraine). Not offered on a regular basis.

POLS 6390. Far Eastern Political Systems. 3 hours.

Social, cultural, and political processes in contrasting Far Eastern nations including China, Japan, and Korea. Both domestic and international issues will be examined. Not offered on a regular basis.

POLS 6440. Constitutional Law: Powers. 3 hours.

The substantive law of separation of powers; powers among branches of government and between national and state governments defined; historical coverage is emphasized. Not offered on a regular basis.

POLS 6460. Constitutional Law: Rights and Liberties. 3 hours.

The substantive constitutional law of rights and liberties, with emphasis on political freedom of speech and press, religious freedom, freedom from discrimination, and protection of due process in criminal justice. Not offered on a regular basis.

POLS 6490. Administrative Law. 3 hours.

The legal principles and practical doctrines involved in the work of administrative agencies, vested with quasi-legislative or quasi-judicial powers. Not offered on a regular basis.

POLS 6910. Public Administration and Democracy. 3 hours.

Administrative organization, relations, and controls facing the contemporary public management in the United States. The institutional, political, and normative environment of the public manager in democratic society. Among the questions considered is the problem of reconciling bureaucratic government and democratic principles. Not offered on a regular basis.

POLS 6920. Public Personnel Administration. 3 hours.

Procedures and problems of governmental personnel administration. Included in the topics are classification, performance appraisal, hiring practices, affirmative action, and pay equity. Studies of governmental agencies are employed to give the students first-hand knowledge of governmental personnel administration. Not offered on a regular basis.

POLS 6930. Public Financial Administration. 3 hours.

Activities involved in the collection, custody and expenditure of public revenue, such as the assessment and collection of taxes, public borrowing and debt administration, the preparation and enactment of the budget, financial accountability and the audit. In addition, the course covers politics of the budgetary process. Not offered on a regular basis.

POLS 6960. Organizational Theory. 3 hours.

Major concepts and theories associated with the modern public organization. Organizational environments, goals and effectiveness, strategy and decision-making, structure and design, communication, leadership, individual work behaviors, and other topics. The implications of the public sector context and political environments for these topics. Not offered on a regular basis.

POLS 6980. Law, Ethics, and Professionalism in Public Administration. 1 hour.

An exposition of three elements of public administration: the legal environment, the subject of ethics, and a consideration of the extent to which public administration can be considered a profession. Offered fall semester.

POLS 6990. Communication Skills for Public Managers. 1 hour.

The importance of interpersonal and group skills in public sector management. Students will use the public sector assessment center to assess their communication skills, both oral and written. Offered spring semester.

POLS 7000. Master's Research. 1-6 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department. Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

POLS 7010. Research Design. 3 hours.

Basic scientific methods, broadly defined, to include problems of definition, concept formation, hypothesis testing, explanation and prediction, and theory construction. Offered fall semester.

POLS 7030. Methodology in Political Science. 3 hours.

The use of quantitative methods in political science research. Topics range from descriptive statistics through regression analysis. Offered fall semester.

POLS 7040. Quantitative Methods. 3 hours.

Prerequisite: POLS 7010 and POLS 7030. Multiple regression analysis and related techniques. Focus on assumptions of OLS and applications to political science research. Topics include interactives, specifications, nonlinearities,

error diagnostics, and introduction to time series and causal modeling. Offered spring semester.

POLS 7060. Writing for Publication in Political Science. 3 hours. Repeatable for maximum 6 hours credit.

Preparation and revision of manuscripts suitable for publication in political science journals. Not offered on a regular basis.

POLS 7110. Research Methods in Public Administration. 3 hours.

Basic research methods and their use in public administration from the standpoint of both public policy and public management. Topics covered include the scientific method, experimental and quasi-experimental designs, sampling, interviewing, and questionnaire construction. Offered fall semester.

POLS 7120. Data Applications in Public Administration. 3 hours.

Applications of data analysis techniques to problems in public management and program evaluation. Special attention is devoted to familiarity with computer hardware and software to solve public sector problems. Topics include cross-tabulation, difference of means testing, and regression analysis. Offered every year on a regular basis.

POLS 7300. Master's Thesis. 3-6 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

POLS 7350. Internship in Government. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Integrates government employment experience into the curriculum of the Master of Public Administration degree program. Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper. Offered fall, spring, and summer semesters.

POLS 7380. Ethics in Public Administration. 3 hours.

Leading ethical issues that arise in public administration practice and consideration of the sources to which the public administrator can look for guidance in dealing with these issues. Offered every year on a regular basis.

POLS 7500. Local Government Management. 3 hours.

Description and analysis of the practice of local government management. Key issues in several functional areas of local government service are

highlighted. Offered every year on a regular basis.

POLS 7520. Urban Policy. 3 hours.

Major federal, state, and local policies affecting American urban areas. Major topics include local government finance, service delivery, land use, and urban economic development. Not offered on a regular basis.

POLS 7540. Productivity Improvement in Local Government. 3 hours.

The concept of productivity, its importance in the public sector, principal techniques used to improve productivity in local government, and barriers to productivity improvement initiatives. Not offered on a regular basis.

POLS 7560. Special Topics in Urban Administration. 3 hours. Repeatable for maximum 6 hours credit.

Topics in the area of urban policy and administration. The focus of the course will shift depending on the interest of the instructor and may include such topics as land use policy and regulation, urban service delivery, and local government reform. Not offered on a regular basis.

POLS 7620. Policy Analysis. 3 hours.

Theoretical approaches and concepts associated with the empirical analysis of public policies. Offered every year on a regular basis.

POLS 7630. Policy Implementation. 3 hours.

Public policy implementation literature with emphasis given to the major substantive and methodological issues driving this emerging field of public policy analysis. Bureaucracy's role in policy process, implementation analysis, and theories and methods for studying policy implementation. Offered every year on a regular basis.

POLS 7640. Program Evaluation. 3 hours.

The theoretical perspectives associated with program evaluation; design and measurement procedures; types of evaluative research; and the management of political and ethical problems associated with performing and utilizing evaluation research. Offered every year on a regular basis.

POLS 7650. Public Policy Seminar. 3 hours.

Research seminar on the major analytical techniques and theoretical approaches to decision-making in substantive public policy areas (e.g., environmental protection, health care, natural resources.) Not offered on a regular basis.

POLS 7660. Government and Business. 3 hours.

Economic, social, and political bases for government intervention in market economies, comparative and/or American. Evolution of and justification for regulatory policies, the theoretical debate surrounding government regulations, case studies of specific regulatory programs, and

alternatives to regulation. Offered every year on a regular basis.

POLS 7720. Public Personnel Problems in Public Agencies. 3 hours.

Selected problems in public personnel administration, using case studies and other vehicles to simulate realistic situations encountered in public agencies. Developing analytical and behavioral skills applicable in public personnel administration. Offered every year on a regular basis.

POLS 7830. Public Financial Management. 3 hours.

Principal aspects of public financial management, including accounting, budgeting, capital budgeting, revenue forecasting, risk management, pension management, and auditing. The focus of the course is on state and local finance. Offered every year on a regular basis.

POLS 7840. Budget Practicum. 3 hours.

The development of practical budgeting skills, with a special emphasis on budget development at the local level of government. Practical computer-based exercises enable the student to learn the logic of budget format and techniques of budget analysis. Offered every year on a regular basis.

POLS 7900. Managing Volunteers in the Public and Nonprofit Sectors. 3 hours.

Involvement of volunteers in government and nonprofit organizations, especially in relation to delivering services and maintaining the organization. Covers size, scope, significance, and challenges of the voluntary sector, and functions of volunteer administration, including recruitment, screening, placement, recognition, and evaluation. Not offered on a regular basis.

POLS 7930. Human Services Administration in Government. 3 hours.

Special problems and processes involved in administering government and human service programs in health, welfare, disability, social security, and other service areas. Privatization of services will be considered as an alternative service-delivery mechanism. Offered every year on a regular basis.

POLS 7960. Organizational Behavior. 3 hours.
Prerequisite: POLS 6960.

Focuses on four arenas or levels of management which must be integrated in the pursuit of public-sector excellence. These arenas involve individuals, pairs of individuals, supervisor/subordinates, and small groups. Institutional, behavioral, and psychological factors will be emphasized. Not offered on a regular basis.

POLS 8000. Strategy in Politics. 3 hours.

Formal analysis of strategic behavior in various political settings. Factors leading to competition and cooperation. Course content includes social

choice theory, game theory, and other forms of rational choice analysis. Not offered on a regular basis.

POLS 8020. Formal Analysis. 3 hours.

Game theoretic analysis of politics. The role of information and uncertainty about preferences and beliefs. Not offered on a regular basis.

POLS 8040. Political Economy. 3 hours.

Various ways of analyzing the interaction between government and the economy. Not offered on a regular basis.

POLS 8050. Empirical Political Theory. 3 hours.

Principal empirically oriented models and theories used in political science. Not offered on a regular basis.

POLS 8060. Systems of Political Philosophy. 3 hours. Repeatable for maximum 6 hours credit.

Writings of a leading political philosopher, aimed at seeing how the elements of his/her thought form a comprehensive and unified view of political life. Philosophers to be studied will include Plato, Aristotle, St. Thomas Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Hegel, Marx and Nietzsche. Classic works in American thought, such as the Federalist, will also be considered. Not offered on a regular basis.

POLS 8080. Problems in Political Philosophy. 3 hours.

Selected problems in political philosophy, including the nature of justice; the functions of government; the ground of legitimate authority; the scope of individual rights; the foundations of democratic government; political obligation, civil disobedience, and revolution; the meaning of responsibility; and views of human nature and their political relevance. Not offered on a regular basis.

POLS 8090. Recent Political Thought. 3 hours.

Important and influential recent political theories, including ideologies and scientific theories as well as contributions to political philosophy. The aim will be to understand both the approaches to political theory that have emerged in the contemporary period and the alternative interpretations that have been given of contemporary individuals and society. Not offered on a regular basis.

POLS 8110. Research on Electoral Behavior. 3 hours.

Factors which contribute to electoral choice and the dynamics of voting in the American political system. Offered every year on a regular basis.

POLS 8120. Southern Politics. 3 hours.

The politics of individual states, the emergence of the Republican Party, Black mobilization, the consequences of reapportionment, and selected civil rights topics. Not offered on a regular basis.

POLS 8130. Government and Interest Groups. 3 hours.

Theories of interest group formation and maintenance. Lobbying and the role of interest groups in the United States governmental process, including traditional literature on pluralism and interest groups as well as modern literature addressing traditional questions and problems. Not offered on a regular basis.

POLS 8140. The Legislative Process. 3 hours.

The United States Congress, with emphasis on recruitment and composition of leadership, procedures, and the role of parties and interest groups. Recent changes in the Congress will be examined in light of theories of representation. Not offered on a regular basis.

POLS 8150. The United States Presidency. 3 hours.

Powers of the United States Presidency. The President's constitutional position, including theories of executive dominance and executive privilege. Attention will also be given to the President's attempts to control the executive branch, presidential-congressional relations, and the president's leadership over domestic and foreign policy. Not offered on a regular basis.

POLS 8160. Urban Politics. 3 hours.

Local politics in the United States, including the social and economic development of cities, local government structures and their effects, the participation of individuals and groups in urban politics, and major theoretical perspectives in urban research. Not offered on a regular basis.

POLS 8170. American Political Parties. 3 hours.

Research on political parties in the United States, with an emphasis on empirical analysis and theories of parties. Not offered on a regular basis.

POLS 8180. Readings and Research in American Government. 3 hours. Repeatable for maximum 9 hours credit.

Independent study of selected topics and problems in American government. Not offered on a regular basis.

POLS 8190. Campaign Politics. 3 hours.

Presidential selection processes, including impact of rules, money, media, and voting in primaries. Focus on campaign dynamics and strategy. Not offered on a regular basis.

POLS 8200. Special Topics in International Relations. 3 hours. Repeatable for maximum 6 hours credit.

The substance and method of selected topics in comparative politics with an emphasis on theory, analysis, and praxis. Topics selected by the instructor vary from semester to semester. Not offered on a regular basis.

POLS 8260. Human Rights Policy. 3 hours.

Human rights issue as it affects the process of policy formulation and implementation, including both domestic and international policy areas. Not offered on a regular basis.

POLS 8270. Politics of Trade and Security Policy. 3 hours.

Domestic and international politics of trade and security of selected countries, including the United States. Not offered on a regular basis.

POLS 8300. Selected Topics in Comparative Politics. 3 hours. Repeatable for maximum 6 hours credit.

Research oriented seminar of both the substance and method of selected topics in comparative politics, with an emphasis on theory, analysis, and praxis. Topics selected by the instructor vary from semester to semester. Not offered on a regular basis.

POLS 8310. Politics of Industrialized Democracies. 3 hours. Repeatable for maximum 6 hours credit.

Political economy and institutions of the major capitalist countries in Europe, East Asia, and North America. Comparative analysis of both country-specific and function-specific criteria, such as state-society relations and formal and informal political institutions. Not offered on a regular basis.

POLS 8330. Politics of Post-Communist Political Systems. 3 hours.

Domestic and international politics of selected post-communist states. Not offered on a regular basis.

POLS 8340. Seminar in Developing Political Systems. 3 hours.

Theory of creating integrated, viable, modernizing political systems in a world of economic inequalities. The focus is on the kinds of political institutions that can help manage the social stress of racial, ethnic, cultural, social, economic, technological, and ideological diversity. Not offered on a regular basis.

POLS 8410. Modern Legal Theory. 3 hours.

Theoretical approaches to analyzing the role of courts in a democracy, including methods for interpreting and applying constitutional and other legal texts. Not offered on a regular basis.

POLS 8430. Judicial Politics. 3 hours.

Judicial processes, policy-making, and policies, with emphasis on judicial selection, models of judicial decision-making, institutional constraints on judicial choice, and the implementation and impact of judicial decisions. Not offered on a regular basis.

POLS 8450. Special Topics in Law, Courts, and Judicial Process. 3 hours.

Special topics relating to law, courts, and the judicial process (such as "Women and the Law," "State Legal Systems," "Comparative Legal Systems," "Research Seminar on Trial Courts," etc.). Not offered on a regular basis.

POLS 8710. Problems in Public Administration. 3 hours.

Perennial and emerging research issues, perspectives, and controversies in the field of public administration. Not offered on a regular basis.

POLS 8720. Seminar in Selected Problems in Public Personnel Administration. 3 hours. Repeatable for maximum 9 hours credit.

Special topics, such as public sector labor relations and collective bargaining; issues related to job analysis, evaluation, and compensation; or civil service reform. Offered every year on a regular basis.

POLS 8830. Seminar in Public Budgeting. 3 hours.

A doctoral seminar which considers the works of the major scholars in the field of public budgeting and finance. Not offered on a regular basis.

POLS 8840. Metropolitan Fiscal Problems. 3 hours.

Public economy of metropolitan areas and selected special metropolitan fiscal problems in the areas of public expenditures, revenues, and fiscal administration. Not offered on a regular basis.

POLS 8850. Quantitative Analysis for Public Decision-Making. 3 hours.

Quantitative analysis and techniques used in public sector decision-making. Offered every year on a regular basis.

POLS 8940. Seminar in Comparative Administration. 3 hours.

Administrative systems other than the United States. Among the topics covered will be personnel administration, public finance, organizational analysis, and public policy problems. Possible nations covered include Europe, Africa, Asia, and Latin American political and administrative systems. Not offered on a regular basis.

POLS 8960. Organization Development and Change. 3 hours.

Intellectual and theoretical perspectives on a complex area of inquiry and application—organizational development and change. The course illustrates various ways in which significant theoretical issues can be approached in practical ways, and in which central practical issues can be approached in theoretically-rich ways. Not offered on a regular basis.

POLS 9000. Doctoral Research. 3-6 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

POLS 9200. Special Problems in Political Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research in specialized areas of Political Science. For students with advanced graduate standing. Students must have completed a minimum of four courses in the general area of the specialized topic. Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper. Offered fall, spring, and summer semesters.

POLS 9300. Doctoral Dissertation. 3-6 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Psychology

Joseph D. Allen, *Head*

Irwin S. Bernstein, *Graduate Coordinator*,
542-3103

(Psychology Building)

Graduate work leading to the PhD degree is offered in biopsychology, clinical psychology, cognitive/experimental psychology, applied psychology, social psychology, and life-span developmental psychology. The large majority of students are admitted directly into one of the six doctoral programs and they are required to obtain the master's degree on the way to the doctoral degree. Foreign language proficiency is not required by the department, but individual programs and advisory committees may set such a requirement.

The biopsychology program permits specialization in physiological psychology, and animal behavior or a combination of the specialties. The clinical program, approved by the American Psychological Association, seeks to prepare the student for a variety of

professional roles by providing a solid foundation in technique, theory and research in clinical psychology. In the cognitive/experimental program, specialization is offered in learning and performance, sensation and perception, and cognitive processes. Specialization may also be arranged in history and systems of psychology. The applied psychology program permits the student to concentrate in human factors psychology, industrial-organizational psychology, psychometrics, and related areas. In the social program, substantive training is provided in the areas of social-cognitive and attitudinal theories, group structure and process, and personality and social development, along with methodological training in group observation, attitude measurement, and survey research. The life-span developmental psychology program seeks to provide students with a firm grounding in developmental processes that will prepare them for careers as academic teachers/researchers or as investigators in the many nonacademic settings in which developmental issues and problems are addressed.

Facilities for graduate training in psychology include relatively complete physiological, psychophysiological, psychoacoustical, psychomotor, and other experimental psychology laboratories, the Psychology Clinic providing diagnostic and therapeutic services, the University Testing and Evaluation Center, extensive human and animal research facilities, including a colony of nonhuman primates, an electroencephalography laboratory for computer analysis of evoked potential responses, a Child Development Subject Pool, child subject availability and research labs at The McPhaul Children's Center, and the University Computer Center. Other research opportunities are offered in the Institute for Behavioral Research.

Although most students begin their graduate work in the fall semester, initial admission in any other semester is permitted by all programs except clinical psychology. After they have been admitted, prospective students who are eligible for financial aid will be notified if any additional information is required.

(PSYC)AFAM 4500/6500. Psychology of Prejudice. 3 hours.

Prerequisite: (PSYC 1101 or SOCI 1101) and senior standing.

Motivational, cognitive, social, and cultural factors that lead to discrimination in our society and various perspectives found in the research on discrimination. Not offered on a regular basis.

(PSYC)AFAM 4550/6550. Classic Studies in Black Psychology. 3 hours.

Prerequisite: AFAM(PSYC) 3150 or permission of department.

Studies which have had major social or scientific impact on the lives of Black Americans and the way black people have been viewed within psychology. Approach is historical and interdisciplinary. Not offered on a regular basis.

PSYC 4600/6600. Psychology of Women. 3 hours.

Prerequisite: PSYC 3230 or PSYC 4200 or PSYC 4220.

Women as the subject of psychological inquiry. Topics include personality theory, psychopathology, psychological aspects of reproductive health, psychological reaction to being victimized, and life crises. Not offered on a regular basis.

PSYC 4700/6700. Psychology of Aging. 3 hours.

Research in gerontology, with emphasis on learning, personality, attitudes, perception, ability, and adjustment in the aged. Not offered on a regular basis.

PSYC 4930/6930. Systems of Psychology. 3 hours.

Prerequisite: Permission of department.

Major theoretical systems in psychology, with special emphasis on developments of the last half-century, especially behaviorism and cognitivism. Not offered on a regular basis.

PSYC 5750/7750. Principles of Primate Phylogeny. 3 hours.

Prerequisite: Junior or senior standing.

Interrelationships among morphology, behavior, and systematics for students studying primate behavior. Not offered on a regular basis.

PSYC 5760/7760. Comparative Physical and Psychological Development of the Primates. 3 hours.

Prerequisite: Junior or senior standing.

Influence of species and developmental environment on normal and abnormal behavioral development. Not offered on a regular basis.

PSYC 5770/7770. Organization of Primate Social Groups. 3 hours.

Prerequisite: Junior or senior standing.

The interaction of ecology, phylogeny, individual behavior, and group organization from a comparative perspective. Not offered on a regular basis.

PSYC 6040. History of Psychology. 3 hours.

Prerequisite: Permission of department.

History of psychology and its antecedents, both classical and modern. Not offered on a regular basis.

PSYC 6120. Behavior Therapy. 3 hours.

Behavior therapy techniques for use with adults. Emphasis on relaxation training, systematic desensitization, modeling, contingency management, aversive control, cognitive restructuring, and similar methods. Not offered on a regular basis.

PSYC 6140. Introduction to Industrial-Organizational Psychology. 3 hours.

Major topics in industrial-organizational psychology, with emphasis on organizational and personnel psychology applied to business, industry, and government. Not offered on a regular basis.

PSYC 6150. Psychometrics. 3 hours.

Prerequisite: Permission of department.

Theoretical and statistical principles that underlie psychological measurement and how they are employed in the development and use of psychological tests. Not offered on a regular basis.

PSYC 6400. Research Methods in Social Psychology. 3 hours.

Methods used in contemporary empirical research by social psychologists. Field and experimental approaches will be examined in terms of their relative strengths, weaknesses, and costs for various research questions. Topics will vary from semester to semester. Not offered on a regular basis.

PSYC 6410. Statistics in Psychological Research. 3 hours.

Prerequisite: Permission of department.

Basic concepts and techniques in descriptive and sampling statistics. Applications of statistics in psychological research. Not offered on a regular basis.

PSYC 6420. Advanced Experimental Psychology. 3 hours.

Prerequisite: Permission of department.

Experimental techniques and methods of experimental work. Especially designed for the student who desires to learn scientific method in psychology. Not offered on a regular basis.

PSYC 6430. Applied Regression Methods in Psychology. 3 hours.

Prerequisite: STAT 6220 and permission of department.

Simple and multiple regression methods as applied to the prediction and explanation of behavior. Topics include the formation and testing of models in experimental and nonexperimental research. Computer software packages are used for data analysis. Not offered on a regular basis.

PSYC 6440. Experimental Design in Psychology. 3 hours.

Prerequisite: STAT 6220 and permission of department.

Design and analysis of psychological research, with emphasis on the logical foundations of experimental design. Not offered on a regular basis.

PSYC 6510. Theories of Personality. 3 hours.

Prerequisite: Permission of department.

Major theories of personality, with some attention given to current research and to methodological issues in the field. Not offered on a regular basis.

PSYC 6520. Basic Learning Processes. 3 hours.

Prerequisite: Permission of department.

Empirical phenomena and theories concerning basic forms of nonassociative and associative learning, primarily stimulus-stimulus and response-consequence associations. Phenomena include habituation, Pavlovian and operant conditioning, generalization and discrimination, concept formation, and choice behavior. Historical and comparative aspects of the subject are emphasized. Not offered on a regular basis.

PSYC 6530. Individual Differences. 3 hours.

Prerequisite: Permission of department.

Nature and interrelationship of psychological traits, including maximum performance (intelligence, achievement, etc.) and typical behavior (interests, personality, etc.) traits. Also considered are the extent of racial, sex, age, and other group differences as well as the causal factors (genetics, environmental, etc.) in individual differences. Not offered on a regular basis.

PSYC 6630. Cognitive Psychology. 3 hours.

Prerequisite: PSYC 6520 and permission of department.

History of cognitive psychology and the basic cognitive processes involved in attention, memory, knowledge representation, information processing, and problem solving. Not offered on a regular basis.

PSYC 6640. Advanced Social Psychology. 3 hours.

Prerequisite: Permission of department.

Ethics in social research, social factors in perception, attitude formation and change, cognitive theories, group structure and process, ideology and personality, and social motivation. Not offered on a regular basis.

PSYC 6650. Methods and Practices in Clinical Psychology. 3 hours.

Prerequisite: Permission of department.

Assessment and behavior-personality change procedures currently used in clinical psychology. The course will also focus on theoretical issues important to these applied procedures. Not offered on a regular basis.

PSYC 6670. Research Design in Clinical Psychology. 3 hours.

Prerequisite: PSYC 6650.

Research problems and strategies in clinical psychology. Methods for evaluating treatment outcome will be the focus of study. Both single subject and group designs. Not offered on a regular basis.

PSYC 6800. Physiological Psychology. 3 hours.

The relationship between the internal environment and such behaviors as food intake control, mating behavior, neural action, emotion, etc.. Not offered on a regular basis.

PSYC 6810. Comparative Psychology. 3 hours.

Prerequisite: Permission of department.

Literature in fundamental aspects of comparative psychology. Not offered on a regular basis.

PSYC 6910. Biological Foundations of Behavior. 3 hours.

Prerequisite: Permission of department.

Literature in the fundamental aspects of physiological psychology. Not offered on a regular basis.

PSYC 6920. Sensory Psychology. 3 hours.

Prerequisite: Permission of department.

Literature in the fundamental aspects of sensation and perception. Not offered on a regular basis.

PSYC 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PSYC 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PSYC 7530. Personality Assessment. 3 hours.

Prerequisite: PSYC 8140 or permission of department.

Clinical application of selected assessment tools, with emphasis on MMPI, TAT, and Rorschach, including theoretical assumptions and interpretation of data. Not offered on a regular basis.

PSYC 7540. Psychology of Disadvantaged and Minority Groups. 3 hours.

Psychological aspects of minority and disadvantaged groups in the United States and the impact of the discipline of psychology on these groups. Not offered on a regular basis.

PSYC 7550. Treatment of Sexual Dysfunction. 3 hours.

Prerequisite: PSYC 8140.

Biological and psychological aspects of human sexual dysfunctions, with a discussion of interviewing, psychometric, behavioral, and psychophysiological approaches to assessment and common treatment methods. Not offered on a regular basis.

PSYC 8000. Advanced Topics in Psychology. 3 hours. Repeatable for maximum 15 hours credit.

Current topics and new developments in the field of psychology. Not offered on a regular basis.

PSYC 8060. Vision Seminar. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PSYC 6920 or permission of department.

Specific topics in areas representative of contemporary research and theory in visual science. Not offered on a regular basis.

PSYC 8070. Audition. 3 hours.

Prerequisite: Permission of department.

Theories of hearing and their experimental bases are examined in detail, along with demonstrations of experimental techniques in the area. Not offered on a regular basis.

(PSYC)EPSY(LING) 8130. Psycholinguistics. 3 hours.

Recent theoretical and experimental work on the psychological aspects of semantics, grammar, and discourse processes are surveyed. Language development is also considered. Offered on a regular basis.

PSYC 8140. Advanced Psychopathology: Adults. 3 hours.

Prerequisite: PSYC 4230 and permission of department.

Surveys, historical trends, and contemporary theories of psychopathology; reviews methods, issues, validity, and utility of classificatory systems; evaluates the intrinsic-attribute properties of various behavior disorders as well as related assessment; and treatment procedures. Not offered on a regular basis.

PSYC 8200. Operant Conditioning. 3 hours.

Theoretical and practical approaches to the assessment of free-going behavior. Laboratory exercises in the circuitry and logic of operant conditioning apparatus and design are included. Not offered on a regular basis.

PSYC 8220. Human Memory. 3 hours.

Major phenomena, experimental procedures, and theoretical models of human memory. Not offered on a regular basis.

PSYC 8230. Classical Perception. 3 hours.

Classical problem areas of perception (e.g., contour, movement, illusions), with emphasis on the perceptual process and its relation to other psy-

chological functions. Not offered on a regular basis.

PSYC 8250. Cognitive Theories and Models. 3 hours.

Prerequisite: PSYC 6630.

Cognitive theories and models proposed for human behavior in memory, reasoning, language, mathematics, judgment, imagery, problem solving, and thinking. Not offered on a regular basis.

PSYC 8260. Applied Cognition. 3 hours.

Cognitive psychology with a perspective on applying knowledge from research on basic cognitive processes in attention, memory, knowledge representation, and decision making to the workplace. Not offered on a regular basis.

PSYC 8270. Cognitive Research Seminar. 1 hour. Repeatable for maximum 5 hours credit.

Prerequisite: Permission of department.

Topics in cognitive psychology, including perception, memory, reading, attention, language, mathematics, and decision making. Non-Traditional Format: Cognitive research, with meetings arranged between major professor and student. Not offered on a regular basis.

PSYC 8280. Individual Differences in Child Cognition. 3 hours.

Prerequisite: PSYC 8800.

Theory and research in individual differences in children's cognitive development, with emphasis on the stability of intelligence, the modifiability of intelligence, and cognitive characteristics associated with individual differences in intelligence. Not offered on a regular basis.

PSYC 8300. Neuroanatomy for Behavioral Scientists. 3 hours.

Prerequisite: PSYC 6910.

Basic, functional neuroanatomy of mammals, including humans, is emphasized to provide a foundation for understanding the neuroanatomical substrates of perception, motivation, emotion, learning, and other cognitive and behavioral processes. Not offered on a regular basis.

PSYC 8310. Advanced Comparative Psychology. 3 hours.

Prerequisite: PSYC 6810.

Topics in comparative psychology which include history, relation to other disciplines, behavior genetics, ontogenetic principles and processes, and problems in the comparative study of complex processes. Not offered on a regular basis.

PSYC 8330. Laboratory Apprenticeship in Physiological and Comparative Psychology. 3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: PSYC 6810 and permission of department.

Approaches and research methods of physiological and comparative psychology. Non-Traditional Format: Laboratory apprenticeship, with meet-

ings arranged between major professor and student. Offered fall, spring, and summer semesters.

PSYC 8350. Sociobiology. 3 hours.

Basic principles of sociobiology beginning with Wilson's classic book. The scientific theory will be emphasized while noting popular overextensions and common logical fallacies. Tinbergen's analysis of structure, proximate cause, ontogenetic cause, and evolutionary selective pressures will be used to critically evaluate conclusions. Not offered on a regular basis.

PSYC 8360. Comparative Cognition. 3 hours.

Prerequisite: PSYC 6810 or PSYC 8310.

Traditional and contemporary, empirical and theoretical research which may be subsumed under "cognitive processes" and which has involved nonhuman animals. Among the topics will be Piagetian concepts, oddity and sameness-difference judgments, color, form, size, number, and "natural category" judgments, and other class and relational conceptual judgments. Not offered on a regular basis.

PSYC 8370. Seminar in Comparative Psychology. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PSYC 6910.

Particular problem areas within comparative psychology. Emphasis is placed upon the evaluation of current research and theory in the development of research ideas by the student. Not offered on a regular basis.

PSYC 8380. Behavioral Neuroendocrinology. 3 hours.

Prerequisite: PSYC 6910 or CBIO 4730/6730.

Basic principles of neuroendocrinology and their applications to studies of activity, ingestive behavior, learning and memory, stress and emotion, and reproductive behavior. Not offered on a regular basis.

PSYC 8390. Seminar in Physiological Psychology. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: PSYC 6910.

Particular problem areas within physiological psychology. Emphasis is placed upon evaluation of current research and theory and students' development of original research ideas. Not offered on a regular basis.

PSYC 8500. Clinical Staffing Procedures. 1-3 hours. Repeatable for maximum 26 hours credit.

Prerequisite: Permission of major.

Practicum in clinical psychology. Supervised experience in assessment and treatment of clinical problems using a wide variety of applicable techniques. Professional roles and ethical concepts of the clinical psychologist are integrated with clinical procedures. Non-Traditional Format: Clinical staffing procedures, with meetings arranged be-

tween major professor and student. Offered fall and spring semesters.

PSYC 8510. Child Behavior Therapy. 3 hours.
Prerequisite: PSYC 8140.

Behavior change strategies for child behavior problems occurring in the home, school, or institution. Conduct problems, hyperactivity, learning problems, social withdrawal, mental retardation, and autism are among the disorders examined. Not offered on a regular basis.

PSYC 8520. Behavioral Medicine/Health Psychology. 3 hours.

Prerequisite: PSYC 6650 and PSYC 6910 and permission of department.

The definition, scope, and research efforts in the field of behavioral medicine-health psychology will be discussed. The behavioral concomitants of select medical and psychophysiological disorders (e.g., cardiovascular, respiratory, and pain related problems) as well as psychologically based interventions. Not offered on a regular basis.

PSYC 8540. Marital Dysfunction and Intervention. 3 hours.

Prerequisite: PSYC 8140.

Contemporary empirical research on marital functioning and the treatment of marital dysfunction with an emphasis on characteristics of concordant and discordant couples, theoretically divergent models of marital functioning, and the efficacy of available methods of therapeutic intervention. Not offered on a regular basis.

PSYC 8550. Neuropsychological Assessment. 3 hours.

Prerequisite: PSYC 8300.

Theories of brain function in the human. Methods of detecting abnormal functioning and the localization of such abnormal functioning by behavioral methods. Possible etiologies of such lesions. Not offered on a regular basis.

PSYC 8600. Comparative Behavioral Development. 3 hours.

Prerequisite: PSYC 8800 or permission of department.

The interface between biology and psychology in the study of development. Evolutionary and psychobiological approaches to behavioral development across species and consideration of human behavioral development from these perspectives. Not offered on a regular basis.

PSYC 8610. Psychophysical Methods and Psychological Scaling. 3 hours.

Methods and appropriate theories to the investigation and scaling of sensory and nonsensory stimulus events. Single and multidimensional scales. Not offered on a regular basis.

PSYC 8710. Theories of Attitude Structure, Formation, and Change. 3 hours.

Prerequisite: PSYC 6640.

Theoretical approaches to the organization and formation of beliefs and attitudes to cognitive consistency, and to the determinants of attitude stability and change. Not offered on a regular basis.

PSYC 8720. Group Structure and Process. 3 hours.

Prerequisite: PSYC 6640.

Situational and individual determinants of social structure and interaction in face-to-face groups. Various theories of exchange, equity, power, and leadership. Not offered on a regular basis.

PSYC 8730. Theories of Social Psychology. 3 hours.

Prerequisite: Permission of department.

Theoretical and conceptual frames of reference that contribute to our knowledge of social psychology, including consideration of such theories as cognitive consistency, social exchange, symbolic interaction, role theory, group process, and collective behavior. Not offered on a regular basis.

PSYC 8790. Advanced Seminar in Social Psychology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PSYC 6640.

Illustrative topics are social motivation, conformity, social power, interpersonal perception, simulation and mathematical models of social behavior, and vicarious learning. Not offered on a regular basis.

PSYC 8800. Developmental Psychology. 3 hours.

Prerequisite: Permission of department.

Critical survey of evidence concerning physical, social, and psychological development of primates. Special emphasis is placed on comparative analysis for understanding human development. Not offered on a regular basis.

PSYC 8810. Psychology of Health and Illness. 3 hours.

Psychological influences on health, illness, and responses to those states. Psychological origins and outcomes of health policy and health interventions. Not offered on a regular basis.

PSYC 8830. Cognition and Aging. 3 hours.

Prerequisite: PSYC 6630.

Topics in cognition and aging, including age-related changes in memory, problem-solving, reasoning, intelligence, and attention; role of compensatory mechanisms, structures, and processes, including experience, expertise, knowledge structures, and wisdom. Not offered on a regular basis.

PSYC 8840. Personality and Social Development. 3 hours.

Literature relevant to early childhood determinants and developmental processes to personal-

ity and social behavior. Current research, theories, and methodological issues. Not offered on a regular basis.

PSYC 8850. Perceptual Development. 3 hours. Prerequisite: PSYC 6920 or PSYC 8230.

Ontogenetic changes in perception and their importance for cognitive processes with emphasis on the implications of these changes for perceptual theories. Not offered on a regular basis.

PSYC 8860. Cognitive Development: Infancy to Adolescence. 3 hours.

Prerequisite: PSYC 8800.

Current research on problems, issues, and theories relevant to the development of complex cognitive processes in infancy, childhood, and adolescence. Not offered on a regular basis.

PSYC 8870. Theories of Psychological Development. 3 hours.

Prerequisite: PSYC 8800.

Logical and empirical adequacies of modern theories of psychological development in relation to selected issues relevant to theory construction in the behavior sciences. Not offered on a regular basis.

PSYC 8880. Human Sexual Behavior. 3 hours.

Nature and variety of human sexual behavior in many settings. Not offered on a regular basis.

PSYC 8890. Seminar in Developmental Processes. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Current topics in developmental psychology. Emphasis on independent study and research. Not offered on a regular basis.

PSYC 8900. Psychopharmacology Seminar. 3 hours.

Prerequisite: PSYC 6910.

Psychopharmacology literature. Emphasis is placed on basic behavioral research. Pharmacotherapy and clinical topics. Not offered on a regular basis.

PSYC 8920. Behavior Problems in Children. 3 hours.

The child's adjustment to his or her environment with a consideration of the causes, treatment, and prevention of behavior problems. Utilization of case materials and research problems in the field will be carried out by the student. Not offered on a regular basis.

PSYC 8930. Advanced Psychological Measurement. 3 hours.

Prerequisite: PSYC 6150.

Modern test theory approaches to test construction, reliability, validity, item, and factor analysis. Not offered on a regular basis.

PSYC 8940. Cognitive Measurement. 3 hours.

Prerequisite: PSYC 8930.

Classical and contemporary readings related to the applications of measurement to industry, education, and related areas of the behavioral sciences. Not offered on a regular basis.

PSYC 8950. Non-Cognitive Measurement. 3 hours.

Prerequisite: PSYC 8930.

Approaches to interest and personality measurement, artifacts and methodology, dimensions, organization, and utility. Not offered on a regular basis.

PSYC 8960. Training and Development. 3 hours.

Prerequisite: Permission of department.

Principle systems and techniques applicable to industrial and organizational training and to management development. Not offered on a regular basis.

PSYC 8970. Organizational Psychology. 3 hours.

Prerequisite: PSYC 6140 or permission of department.

Theories and research in selected areas of organizational behavior. Emphasis is on intrapersonal behavior, such as motivation, job stress, and job satisfaction. Not offered on a regular basis.

PSYC 8980. Seminar in Industrial-Organizational Psychology. 3 hours. Repeatable for maximum 18 hours credit.

Consideration of significant and current topics in industrial-organizational psychology as determined by the interests and research activities of the faculty. Not offered on a regular basis.

PSYC 8990. Seminar in Psychometrics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PSYC 6430 or PSYC 8930.

Consideration of significant and current topics are defined by the interests and research activities of the faculty. Not offered on a regular basis.

PSYC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PSYC 9100. Special Problems. 1-15 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Extensive readings or empirical research in selected areas or planning and pilot studies preparatory to a thesis. Non-Traditional Format: Special problems, with meetings arranged between major professor and student. Offered fall, spring, and summer semesters.

PSYC 9200. Clinical Internship in Psychology. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of major.

Professional practice of clinical psychology under constant and close supervision. This professional work will include treatment of patients, group and individual psychotherapy, teaching, and research. Non-Traditional Format: Clinical internship, with meetings arranged between major professor and student. Offered fall, spring, and summer semesters.

PSYC 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

PSYC 9880. Seminar in Staffing. 3 hours.

Prerequisite: PSYC 6140 or permission of department.

Methods appropriate to the development and administration of the staffing process in contemporary organizations. The strategies and the statistics of the validation of personnel screening devices: personnel testing, interviewing, and biographical information. Not offered on a regular basis.

Religion

George E. Howard, *Head*

David S. Williams, *Graduate Coordinator,*

542-5356

(Peabody Hall)

The department offers a comprehensive program of studies in the field of religion leading to the MA degree. Areas of concentration are in Biblical studies, Christian studies, Jewish studies, Islamic studies, and Indian and East Asian religious studies. Various methodologies are employed in these areas. Admission to the MA program presupposes a thorough background in religious studies. The graduate program is designed to give the student a broad and thorough training in the field of religion with a specialization in some area of concentration.

For the MA degree, reading knowledge of one foreign language is required.

Permission of department is a prerequisite

for these courses unless otherwise stated.

Religion

RELI 4001/6001. Old Testament/Hebrew Bible Literature. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The nature, content, and problems of the Old Testament/Hebrew Bible, with attention given to historical data, literary forms, and ancient Near Eastern cultural backgrounds. Offered every even-numbered year on a regular basis.

RELI 4002/6002. Prophetic Literature of the Old Testament/Hebrew Bible. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The origin and development of the phenomenon of prophecy as it existed throughout the history of ancient Israel. Offered every even-numbered year on a regular basis.

RELI 4003/6003. Ancient Israelite Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Origins of the religion of ancient Israel, its emergence from and continuities with ancient West Semitic religion and culture. Historical and comparative methods, emphasizing current knowledge of Near Eastern history and religions contemporary with ancient Israel. Offered every odd-numbered year on a regular basis.

RELI 4040/6040. Apocalyptic Literature. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Apocalyptic literature from its origins in the sixth and fifth centuries BCE down to its flourishing in Hellenistic and Roman times. Texts to be studied include Isaiah 24-27, 40-66, Zechariah 9-14, Joel, Malachi, Daniel, I Enoch, IV Ezra, Baruch, Qumran material, Mark 13 and the Book of Revelation. Questions bearing on contemporary theological significance will also be discussed. Offered every even-numbered year on a regular basis.

RELI 4070/6070. Judaism. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The interaction of Jewish history and Western civilization, with emphasis upon the development of Jewish religion in the biblical, rabbinic, and modern periods. Offered every even-numbered year on a regular basis.

RELI 4071/6071. The Holocaust. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The background and legacy of the destruction of European Jewry from 1933 to 1945. Topics include: the historical context, Holocaust art, literature, and film, the reactions of rescuers and bystanders, and theological issues raised by the Holocaust. Offered every even-numbered year on a regular basis.

RELI 4072/6072. American Judaism. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

An examination of what it means, and has meant, to be a Jew in the United States, with emphasis upon the historical experience and religious expressions of American Jews. Offered every odd-numbered year on a regular basis.

RELI 4080/6080. New Testament Literature. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The nature, content, and problems of New Testament literature, with particular attention given to its canonization and textual transmission. Offered every even-numbered year on a regular basis.

RELI 4081/6081. Jesus. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Although primarily a study of what Jesus taught, attention is given to the literary and environmental background of his teaching, the historical life of the teacher, and the contemporary validity of what he taught. Offered every odd-numbered year on a regular basis.

RELI 4082/6082. Life and Letters of Paul. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

An historical-exegetical study of the life and letters of Paul, the relation between Acts and the Pauline epistles, early non-Pauline Gentile Christianity, Pauline theology, and its lasting impression on Christianity. Offered spring semester of odd-numbered years.

RELI 4083/6083. The New Testament World. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The political, social and religious influences on the New Testament writings. Special attention is given to intertestamental Judaism and Hellenistic and Roman religion as background to New Testament Christianity. Offered every odd-numbered year on a regular basis.

RELI 4101/6101. History of Christian Theology (Ancient-Medieval). 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The development of Christian thought from the first through the fourteenth century as expressed in the writings and practices of the Christian community and its leading thinkers. Offered every even-numbered year on a regular basis.

RELI 4102/6102. History of Christian Theology (Modern-Contemporary). 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The development of Christian thought from the fifteenth century to the present as expressed in the writings and practices of the Christian community and its leading thinkers. Offered every even-numbered year on a regular basis.

RELI 4105/6105. Women in Christian History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The relationship between women and Christianity, particularly concerning matters involving gender equality in church and society. Offered every odd-numbered year on a regular basis.

RELI 4107/6107. American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Major and innovative religious organizations, ideas, movements, and personalities as they express themselves in particular religious settings as well as the manner in which they have influenced other aspects of American culture. Offered every odd-numbered year on a regular basis.

RELI(AFAM) 4201/6201. African American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The religious traditions of African Americans from Colonial times to the present; major religious movements, personalities, and ideas and their relationship to various aspects of American culture. Offered every odd-numbered year on a regular basis.

RELI(AFAM) 4202/6202. Southern Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The origins, growth, and current practices of religion in the American South. The interaction between religion and other aspects of Southern culture, such as racial and gender concerns, education, Darwinian science, temperance, and politics. Offered every even-numbered year on a regular basis.

RELI(AFAM) 4203/6203. The Bible in the Black Church. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Biblical interpretation in black America from 1865 to the present. Offered every even-numbered year on a regular basis.

RELI 4300/6300. Islam and Its World. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islam as a religious and sociocultural phenomenon. The fundamental principles of the Islamic faith, Qu'ran, the Sunna of Muhammad, Islamic sectarianism, Islamic law, theology, and mysticism, and themes in Islamic art. The course will also survey Islam in its various forms throughout the world. Offered every even-numbered year on a regular basis.

RELI 4301/6301. Islamic Thought in the Caliphal Age. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic scholarship from the eighth through the fourteenth centuries. Principal topics covered will include the Qur'an and Qur'anic exegesis, the Hadith tradition, Islamic law, theology, philosophy, and Sufi mysticism. Offered every even-numbered year on a regular basis.

RELI 4302/6302. Islam and the Modern World. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic modernism and revivalism as a response to Western cultural penetration since the eighteenth century. Subjects covered will include Sufi reformism, Wahhabism, the Salafiyya movement, Islamic "Fundamentalism," the Iranian Revolution, women's rights, and Western perceptions of Islam. Offered every odd-numbered year on a regular basis.

RELI 4303/6303. The Sufi Way. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic mysticism, both as a set of metaphysical doctrines and as it is expressed in religious practices. Particular attention will be given to the doctrinal development of Sufism, its literature, major figures, and the process of consciousness transformation. Offered every odd-numbered year on a regular basis.

RELI 4400/6400. The History of Religions. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The nature of early primitive religions and the main outlines of the chief living religions of the world. The method will be both historical and analytical. Offered every even-numbered year on a regular basis.

RELI 4401/6401. The Buddhist Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Buddhism from its origin in the life and teachings of the Buddha through the period of philosophical ferment in India, and its thought and institutions in the East and the West up to the present. Offered every odd-numbered year on a regular basis.

RELI 4402/6402. Confucianism and Chinese Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Confucianism and its place in traditional Chinese religion, thought, and culture. Emphasis on the teachings of foundational thinkers such as Confucius, Mencius, and Hsun-tzu. Offered every odd-numbered year on a regular basis.

RELI 4403/6403. The Taoist Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Taoism and its place in traditional Chinese religion, thought, and culture. Emphasis on the classical texts, Lao-tzu and Chuang-tzu; the evolution of the later Taoist religion; and the many varieties of Taoist spirituality. Offered every even-numbered year on a regular basis.

RELI 4404/6404. Japanese Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Religion in Japan from earliest times to the present, with emphasis upon Shinto, the domestication of Buddhism, and the relationship of religion to the Japanese state and "national identity." Particular attention given to the development of Zen in Japan. Offered every odd-numbered year on a regular basis.

RELI(PHIL) 4500/6500. Philosophy of Religion. 3 hours.

Prerequisite: RELI 1003 or PHIL 1000 or PHIL 2200 or PHIL 2400.

The meaning, nature, and validity of religious discourse, beliefs, and practices, involving theories concerning the existence and nature of God and humanity's relation to God. Not offered on a regular basis.

RELI 4510/6510. Indian Philosophy and Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Traces the path of India's religious and philosophical thought from the Indus civilization to the present. Attention will be given to interpreting the orthodox Hindu systems as well as Buddhism and their related religious practices, ethics, castes, and sects. Offered every odd-numbered year on a regular basis.

RELI 4520/6520. Constructive Theology. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The aims, methods, and content of theology as related to the theistic religions of humanity. Offered every odd-numbered year on a regular basis.

RELI 4530/6530. Theology and Culture. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The relation of theology to philosophy, science, technology, and the arts, with special attention to the theological attempts to deal with the impact of science and technology upon culture and civilization. Offered every odd-numbered year on a regular basis.

RELI(ANTH) 4640/6640. Anthropology of Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Anthropological approaches to the world's major religions as they relate to complex societies. Not offered on a regular basis.

RELI 4910/6910. Topics in Asian Religions. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: RELI 3300 or permission of department.

Selected topics in the study of one or more of the religions of Asia. Not offered on a regular basis.

RELI 7000. Master's Research. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

RELI 7300. Master's Thesis. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

RELI 8450. Seminar in Problems and Topics in Biblical Research. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Major issues in Old Testament (Hebrew Bible) and/or New Testament research. Pentateuchal criticism, prophecy, apocalyptic movements, wisdom literature, the history of Religion of Ancient Israel, the text of the New Testament, the canon of the New Testament, Synoptic Gospels, Jesus, and Paul. Some topics will require a reading

knowledge of Greek and/or Hebrew. Not offered on a regular basis.

RELI 8460. Seminar in Problems and Topics in Judaism. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

A major field or issue in Judaic studies such as Rabbinic literature, Jewish Mysticism, or Post-Holocaust Theology, or a particular Jewish thinker or school of thought. Some topics will require a reading knowledge of Hebrew. Offered every odd-numbered year on a regular basis.

RELI 8480. Seminar in Problems and Topics in Islamic Research. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Major issues in Islamic studies, Qur'anic exegesis, Islamic law, philosophy, history, literature, hadith, sectarianism, and Sufism. Offered every even-numbered year on a regular basis.

RELI 8490. Seminar in Problems and Topics in Asian Religions. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Issues in one or more religions of South or East Asia, focusing on textual, historical, and/or interpretive problems. Not offered on a regular basis.

RELI 8500. Seminar in the History of Christian Thought. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Prerequisite: RELI 4102/6102 or permission of department.

The life, thought, and religious activities of a selected major or innovative Christian leader and his/her impact on the development of Christianity. Not offered on a regular basis.

RELI 8510. Seminar in Problems and Topics in Theology. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Prerequisite: Permission of department.

Traditional and contemporary problems and topics in theology. Substantive and methodological issues will be addressed. Offered every even-numbered year on a regular basis.

RELI 8520. Seminar in Christian Theologians. 3 hours. Repeatable for maximum 9 hours credit. One lecture and one 2-hour lab period.

Prerequisite: Permission of department.

The works of Christian theologians both past and present. Substantive and methodological issues will be addressed. Offered every odd-numbered year on a regular basis.

(RELI)PHIL 8630. Seminar in Philosophy of Religion. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Major topics in the philosophy of religion, such as the nature and existence of God, the problem of evil, and the character of religious discourse. Offered every even-numbered year on a regular basis.

RELI 8700. Seminar in Problems and Topics in Religion Research. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Major issues in religion research. Topics will vary according to the area of discussion. Such areas will include biblical studies, religious history and philosophy, rabbinics, Islamics, Buddhism, canonical criticism. Offered fall, spring, and summer semesters.

Arabic

ARAB 4100/6100. Reading and Research in Arabic and Islamic Literature. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: ARAB 2004 or permission of department.

Arabic and Islamic texts with emphasis upon extensive reading and individual and/or group research projects. Qualified students may study Persian and/or Turkish texts. Not offered on a regular basis.

Hebrew

HEBR 4100/6100. Reading and Research in Hebrew Literature. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: HEBR 2004 or permission of department.

Directed study in reading and research in classical Hebrew literature. Non-Traditional Format: Directed study. Not offered on a regular basis.

Semitic

SEMI 4001/6001. Elementary Aramaic/Syriac. 3 hours.

Prerequisite: HEBR 2004 or permission of department.

Aramaic and/or Syriac grammar, especially as related to Hebrew, along with simple readings from religious texts. Not offered on a regular basis.

SEMI 8100. Seminar in Northwest Semitic Epigraphy. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: HEBR 2004 or permission of department.

Various Northwest Semitic inscriptions. Areas of concentration will vary, including Ugaritic, Phoenician, Punic, and Moabite as well as extra biblical Hebrew and Aramaic inscriptions. Not offered on a regular basis.

Romance Languages

Doris Y. Kadish, *Head*

Timothy B. Raser, *Graduate Coordinator*,
542-3163
(Gilbert Hall)

The MA is offered with a major in French, Spanish, or Romance Languages. Coursework, a thesis and a final examination are required for the major. A reading examination (or a grade of B or better in a course at the 2002 level or higher) in one language (exclusive of the major language) must also be completed before the admission to candidacy may be filed. Options in French, Spanish, and Romance Linguistics are offered for the MA. The MA in French (Literature Option) includes 18 hours of required coursework (FREN 6200, FREN 6300, FREN 6400, FREN 6500, FREN 8180, and FREN 7300) and 12 hours of elective credit. The MA in French (Linguistics Option) includes 15 hours of required coursework (FREN 6630, FREN 6700, FREN 6800, FREN 6910, and FREN 7300) and 15 hours of elective credit. The MA in Spanish (Literature Option) includes 18 hours of required coursework (SPAN 6100, SPAN 6200, SPAN 6300, SPAN 6400, and SPAN 8180, and SPAN 7300) and 12 hours of elective credit. The MA in Spanish (Linguistics Option) includes 15 hours of required coursework (SPAN 6650, SPAN 6750, SPAN 6850, SPAN 6950, and SPAN 7300) and 15 hours of elective credit. The MA in Romance Languages (Literature Option) includes 3 hours or required coursework in (ROML 7300) and 27 hours of elective credit, 15 of which must be in the student's major language, and 12 of which must be in the student's minor language. The MA in Romance Languages (Linguistics Option) includes 3 hours of required coursework (ROM 7300) and 27

hours of elective credit, 12 hours of which must be in French and Spanish linguistics.

The MAT is offered with majors in French, Spanish, and Romance languages. Coursework and a final examination are required for the major. All courses must be approved by the student's advisory committee. The MAT in French includes 3 hours of required coursework (Methods of Research in Education) and 30 hours of elective coursework, 6 hours of which must be taken in the College of Education. The MAT in Spanish includes 3 hours of required coursework (Methods of Research in Education) and 30 hours of elective coursework, 6 hours of which must be taken in the College of Education. The MAT in Romance Languages includes 3 hours of required coursework (Methods of Research in Education) and 30 hours of elective coursework, 6 hours of which must be taken in the College of Education.

The PhD is offered in Romance languages with a major in French, Portuguese, or Spanish and a minor in a discipline or an interdisciplinary field related to the major. A minimum of 20 graduate courses (including those taken at the MA level), preliminary examinations, a dissertation and a final oral defense are required. The minor consists of three or four courses (of the 20 required), and, with the approval of the student's advisory committee, may include isolated graduate courses outside the major or minor fields. A reading knowledge of one foreign language (exclusive of the major language and English) is required. The PhD in Romance Languages includes 3 hours of required coursework (ROML 9300) and 36 hours of elective credit.

French

FREN 4120/6120. Topics in French Culture, Language, and Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FREN 3030 and FREN(LING) 3090. Selected topics in French and Francophone culture, civilization, language, linguistics, literature, or literary theory. Given in French. Offered summer semester.

FREN 6200. Francophone Cultures and Literatures. 3 hours.

The major areas of the Francophone world: North America, Antilles, Africa, Maghreb, and Indian Ocean. Literary works will be examined in their linguistic and cultural contexts. Offered every year on a regular basis.

FREN 6300. Medieval and Renaissance Texts and Contexts. 3 hours.

Significant developments in the language, literature, and civilization of France from the Middle Ages through the Renaissance. Discussions will consider writers and genres, linguistic theory, popular culture, and the arts with special attention to historical, social, and political context. Given in French. Offered every year on a regular basis.

FREN 6400. Self, Power, and the Rise of the Modern State. 3 hours.

For the period 1598 to 1789, the literary and other cultural manifestations indicating the emergence of the modern notion of the individual, as well as the modern state. Given in French. Offered every year on a regular basis.

FREN 6500. Revolutions: Artistic and Otherwise. 3 hours.

Literary and non-literary works in their contexts from the nineteenth and twentieth centuries in France. Literary movements from Romanticism to Poststructuralism may be studied, as well as the literary and social influences brought about by the wars and revolutions of this period. Given in French. Offered every year on a regular basis.

FREN(LING) 6630. The French Sound System in a Social Context. 3 hours.

French phonetics: the sounds of French as they relate to levels of language from the vernacular to literature. An examination of how sounds vary with relation to region and social class. Practice in class and in the language laboratory. Given in French. Offered every year on a regular basis.

FREN(LING) 6700. Applied French Linguistics. 3 hours.

Phonology of French as it determines the underlying forms of morphology with an application to the teaching of French to non-native speakers. Emphasis on the concepts of variation, acceptability, and cultural sensitivity. Given in French. Offered every year on a regular basis.

FREN(LING) 6800. French Syntax and Meaning. 3 hours.

The syntax of modern French through readings in descriptive analysis and examples of literary texts to see how word order contributes to meaning. Particular emphasis on levels of style and reflections of social class. Frequent compositions required. Given in French. Offered every year on a regular basis.

FREN(LING) 6910. History of the French Language in its Social and Literary Context. 3 hours.

The major changes in the history of the French language, with special attention to the interaction of linguistic and societal changes and to the representation of these changes in literary texts. Given in French. Offered every year on a regular basis.

FREN 7000. Master's Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FREN 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

FREN(LING) 7700. Teaching College French. 3 hours.

Principles and methods of second language teaching applied to French. An analysis of techniques used to teach listening, speaking, reading, writing, and culture, with an examination of current theories of language acquisition. Given in French. Offered every year on a regular basis.

FREN 8100. Seminar in Medieval Studies. 3 hours. Repeatable for maximum 9 hours credit.

Topics in medieval literature, language, and culture. Study of a particular problem, author, genre, or linguistic topic will be integrated into the larger cultural context of medieval France. Given in French. Not offered on a regular basis.

FREN 8180. Literary Theory. 3 hours.

Theories that have special relevance for understanding French literature, linguistics, and cultural studies. Readings, discussions, and assignments in French. Readings by Bal, Barthes, Baudrillard, Benveniste, Bourdieu, Genette, Irigaray, Jakobson, Kristeva, Lévy-Strauss, Riffaterre. Emphasis on structuralism, poststructuralism, cultural studies, narratology, and feminism. Given in French. Offered every year on a regular basis.

FREN 8200. Seminar in Renaissance Studies. 3 hours. Repeatable for maximum 9 hours credit.

In-depth study of a major author or special topic related to the French Renaissance. Given in French. Not offered on a regular basis.

FREN 8300. Seminar in Seventeenth-Century Studies. 3 hours. Repeatable for maximum 9 hours credit.

Doctoral-level seminar in French seventeenth-century studies. Given in French. Not offered on a regular basis.

FREN 8400. Seminar in Eighteenth-Century Studies. 3 hours. Repeatable for maximum 9 hours credit.

Doctoral-level seminar in French eighteenth-century studies. Given in French. Not offered on a regular basis.

FREN 8500. Seminar in Nineteenth-Century Studies. 3 hours. Repeatable for maximum 9 hours credit.

An intensive study of one major nineteenth-century author or literary movement. Given in French. Not offered on a regular basis.

FREN 8600. Seminar in Twentieth-Century Studies. 3 hours. Repeatable for maximum 9 hours credit.

A major author, group of authors, theme, genre topic or movement in French or Francophone literature. Given in French. Not offered on a regular basis.

FREN 8700. Seminar in Francophone Studies.

3 hours. Repeatable for maximum 9 hours credit. In-depth study of one or several writers, representative of one of the major Francophone areas in the world: North America, Antilles, Africa, Maghreb, and Indian Ocean. Although the primary emphasis will be on literary works, they will be studied in their linguistic and cultural contexts. Not offered on a regular basis.

FREN(LING) 8800. Seminar in French Linguistics. 3 hours. Repeatable for maximum 9 hours credit.

Topics and issues in French linguistics. Possible offerings include Old French, French dialectology, French sociolinguistics, and French semantics and pragmatics. Given in French. Not offered on a regular basis.

Italian

ITAL 4040/6040. Topics in Italian Cinema, Culture, and Literature. 3 hours.

Specific aspects of Italian cinema, culture, and literature. Topics to be selected according to the needs and interests of the students. Taught in seminar fashion with extensive outside readings of primary and secondary sources. Given in English. Offered every year on a regular basis.

ITAL 4120/6120. Topics in Italian Culture, Language, and Literature. 3 hours. Repeatable for maximum 45 hours credit.

Prerequisite: ITAL 4010 or ITAL 4050 or ITAL 4060 or ITAL 4070.

Selected topics in Italian culture, civilization, language, literature, or literary theory. Given in Italian. Offered every year on a regular basis.

Portuguese

PORT 4010/6010. Advanced Language, Literature, and Culture of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or permission of department.

Linguistic, cultural, and literary structures in Portuguese-speaking societies. Emphasis is divided between students' abilities to express themselves fluently in oral and written Portuguese and to identify and contextualize main literary genres and movements. Given in Portuguese. Offered every year on a regular basis.

PORT 4050/6050. Prose of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department.

Representative prose texts from Portugal, Brazil, and Lusophone Africa analyzed in their cultural, social, and political contexts. Given in Portuguese. Offered every year on a regular basis.

PORT 4060/6060. Poetry of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department.

Representative poetic texts from Portugal, Brazil, and Lusophone Africa analyzed in their cultural, social, and political contexts. Given in Portuguese. Offered every year on a regular basis.

PORT 4070/6070. Theater of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department.

Representative plays from Portugal and Brazil analyzed with emphasis on drama as a literary genre, specific aspects of staging and performance, and socio-political context of theatrical production. Given in Portuguese. Offered every year on a regular basis.

PORT 4080/6080. Studies in Culture and Literature of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department.

Studies in culture and literature of the Portuguese-speaking world. Selected topics of special interest in their cultural, social, and political context. Offered every year on a regular basis.

Romance

ROML 7000. Master's Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ROML 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ROML(LING) 8000. Topics in Romance Languages. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Specific aspects of Romance languages, linguistics, literatures, or cultures. Offered every year on a regular basis.

ROML 8500. Readings and Research in Romance Languages. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Extensive readings in the field of the student's program of study determined by the student's previous background, presuming that the student is capable of reading rapidly with comprehension. Offered fall, spring, and summer semesters.

ROML 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ROML 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Spanish

SPAN 4120/6120. Topics in Spanish Culture, Language, and Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Selected topics in Hispanic culture, civilization, language, linguistics, literature, or literary theory. Given in Spanish. Offered every year on a regular basis.

SPAN 6100. Poetry. 3 hours.

Poetry as literary genre in Spain and Spanish America (Middle Ages, Colonial and Post-Colonial, Modern Ages) paying special attention to Hermeneutic theories of text, analysis of poetic language, relevant textual examples, and pertinent contextual aspects (historical, political, social, artistic, philosophical). Given in Spanish. Offered every year on a regular basis.

SPAN 6200. Narrative Fiction. 3 hours.

Narrative fiction as literary genres (novel and short story) in Spain and Spanish America through time (Middle Ages, Colonial and Post-Colonial, Modern Ages) paying special attention to theories of text, language, and linguistic innovations, relevant textual examples, and pertinent contextual aspects (historical, political, social, artistic, philosophical). Given in Spanish. Offered every year on a regular basis.

SPAN 6300. Essay. 3 hours.

Primarily non-fiction narrative as literary genre in Spain and Spanish America through time (Middle Ages, Colonial and Post-Colonial, Modern Ages) paying special attention to historical development and theories of essay, relevant textual examples, and pertinent contextual aspects (historical, political, social, artistic, philosophical). Given in Spanish. Offered every year on a regular basis.

SPAN 6400. Drama. 3 hours.

Dramatic texts as literary genre in Spain and Spanish America. From the Middle Ages to the Modern, historical development and theories of drama, relevant textual examples, and pertinent contextual aspects will be emphasized. Given in Spanish. Offered every year on a regular basis.

SPAN(LING) 6650. Spanish Phonetics and Phonology. 3 hours.

The Spanish sound system using core concepts of linguistics in general and phonology in particular. Characterization and transcription of spoken Spanish. Analysis of important phenomena of language variation in the Hispanic world, including national, geographical, historical, and social dialects. Given in Spanish. Offered every year on a regular basis.

SPAN(LING) 6750. Spanish Syntax and Morphology. 3 hours.

Grammar and language usage in the study of the syntactic and morphological structures of Spanish. The syntax and morphology of the pronoun and verb systems, agreement phenomena, gerunds, comparisons, and modal and aspectual distinctions. Written self-expression on a variety of issues as practical application of grammatical

structures discussed in class. Given in Spanish. Offered every year on a regular basis.

SPAN(LING) 6850. Spanish Applied Linguistics. 3 hours.

Phonetic and morpho-syntactic structures that are problematic for the English-speaking student of Spanish. Ways in which culture is encoded in language. Implications of Spanish linguistics for the teaching and learning of Spanish and the linguistic education of language teachers. Given in Spanish. Offered every year on a regular basis.

SPAN(LING) 6950. Spanish Semantics and Pragmatics. 3 hours.

Semantic and pragmatic approaches to the study of meaning in Spanish. Differences between sentence meaning and speaker meaning. Analysis of types of discourse in Spanish such as narrative and free conversation. Given in Spanish. Offered every year on a regular basis.

SPAN 7000. Master's Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

SPAN 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

SPAN(LING) 7750. Teaching College Spanish. 3 hours.

Foreign language teaching and learning applied to Spanish. Theories of second language acquisition. Techniques and strategies to teach listening, speaking, reading, writing, and culture in context. Activities and procedures of classroom instruction. Issues in the professionalization of Spanish teachers. Given in Spanish. Offered every year on a regular basis.

SPAN(LING) 8010. Topics in Culture, Language, Linguistics, and Literature of the Spanish-Speaking World Seminar. 3 hours. Repeatable for maximum 9 hours credit.

An intensive, integrative, and contextualized study of a specific representative topic in language, literature, culture, and linguistics of the Spanish-speaking world. Given in Spanish. Not offered on a regular basis.

SPAN 8100. Poetry Seminar. 3 hours. Repeatable for maximum 12 hours credit.

A specific topic in poetry of the Spanish-speaking world with special emphasis on theoretical frame-

works and contextualization. Given in Spanish. Not offered on a regular basis.

SPAN 8180. History of Literary Criticism and Critical Theory. 3 hours.

With an emphasis on the twentieth century, an examination of historical and theoretical frameworks and their application in the development of literary genres, movements, and social implications in the Spanish-speaking world. Given in Spanish. Offered every year on a regular basis.

SPAN 8200. Narrative Fiction Seminar. 3 hours. Repeatable for maximum 12 hours credit.

A specific topic in narrative fiction of the Spanish-speaking world with special emphasis on theoretical frameworks and contextualization. Given in Spanish. Not offered on a regular basis.

SPAN 8300. Essay Seminar. 3 hours. Repeatable for maximum 12 hours credit.

A specific topic in non-fiction narrative of the Spanish-speaking world with special emphasis on theoretical frameworks and contextualization. Given in Spanish. Not offered on a regular basis.

SPAN 8400. Drama Seminar. 3 hours. Repeatable for maximum 12 hours credit.

A specific topic in drama of Spanish-speaking world with special emphasis on theoretical frameworks and contextualization. Given in Spanish. Not offered on a regular basis.

Sociology

E. M. Beck, *Head*

William Finlay, *Graduate Coordinator, 542-3195*
(Baldwin Hall)

The department offers programs leading to the degrees Master of Arts and Doctor of Philosophy in sociology. Specialized study is provided in four areas: organizations, occupations and industrial; deviance, criminology and law; social psychology and culture; and race, gender, and inequality. No foreign language is required for the master's or doctoral degrees.

The department has cooperative programs with the Women's Studies Program, the Public Administration Program, and the Center for Global Policy Studies. Research facilities include the Baldwin Data Analysis Center, the Institute for Behavioral Research, the International Laboratory for So-

ciopolitical Ecology, and the Survey Research Center.

SOCI 4240/6240. Sociology of War and the Military. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

War as a phenomenon with social causes and consequences; the military as an occupation and organization. Topics include conscription; the historical experiences of women and minorities in the military; and war as a source of collective memory for generations, ethnic groups, and nations. Offered on a regular basis.

(SOCI)CHFD 4610/6610. The Family. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100.

Family study utilizing data from the fields of anthropology, individual and social psychology, history, sociology, economics, and psychiatry. Not offered on a regular basis.

SOCI 4650/6650. Sociology of Aging. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The status, roles, and demographic aspects of the aging population and its relationship with social institutions. Offered every year on a regular basis.

SOCI 6010. Sociological Approaches to Culture. 3 hours.

Case studies of art, music, literature, rituals and ceremony, food, dress, and other cultural objects. Topics include the dimensions of cultural objects; structuralist, postmodern, functionalist and semiotic perspectives; and basic issues such as consensus and diversity, ideology, collective memory and tradition, religion, social solidarity, conflict, and change. Offered every even-numbered year on a regular basis.

SOCI 6060. Sociology of Education. 3 hours.

Mainstream and critical theories of how society shapes the purposes, processes, and organization of schools; current policy issues and sources of national education data, with primary focus on United States elementary and secondary schools. Offered every year on a regular basis.

SOCI 6090. Social Change. 3 hours.

The causes, nature, and consequences of changes in social structure and institutions. Not offered on a regular basis.

SOCI 6150. Criminal Punishment and Society. 3 hours.

The relationship between contemporary American punishment and social organization and processes. Topics include historical features of, and justifications for, punishment; the death penalty debate; prisoner rights; and prison conditions. Offered every even-numbered year on a regular basis.

SOCI 6160. Sociology of Development. 3 hours.

The political economy of global development and its impact on class, gender, race, and ethnicity; the application and relevance of theoretical and methodological paradigms. Topics include agriculture, urbanization, environment, education, health, migration, economic restructuring, and political and collective strategies. Offered every even-numbered year on a regular basis.

SOCI 6220. Development of Sociological Theory. 3 hours.

Pivotal theories from classic theorists such as Marx, Weber, and Durkheim to the present. Offered every year on a regular basis.

SOCI 6230. Sociological Theory: The German Tradition. 3 hours.

The German theoretical tradition, beginning with Marx and continuing with Wilhelmine-era sociologists, particularly Simmel and Weber; the Weimar and Nazi periods; and postwar critical theorists, notably Habermas. Not offered on a regular basis.

SOCI 6270. Personality and Social Structure. 3 hours.

The social factors that shape behavior and self-concept; theories such as behaviorism, symbolic interactionism, Freudian psychology, cognitive social psychology, and critical approaches. Topics include emotions, human development, and authenticity and sincerity in the postmodern age. Offered every year on a regular basis.

SOCI 6280. Sociology of Gender. 3 hours.

Feminist theories and methodologies on gender, with an emphasis on contemporary American society and the intersection of gender, race, and class. Topics include socialization, sexual orientation, reproduction, violence, family and household, work and global restructuring, and politics. Offered every even-numbered year on a regular basis.

SOCI(AFAM) 6370. Sociology of Race and Ethnicity. 3 hours.

The relationships of racial and ethnic groups with each other and with social institutions and processes. Offered every year on a regular basis.

SOCI 6410. Current Trends in Sociological Theory. 3 hours.

The concepts of community, authority, rank, the sacred, and alienation to examine conflict and consensus, modernity and postmodernity, classical theory, and the problem of meaning. The role of ideas in social integration and change, the problem of legitimation, civil religion in politics, "postmodern" society, and symbolism and moral order. Offered every year on a regular basis.

SOCI 6420. Structured Inequality. 3 hours.

Social stratification in the United States. The perception of class distinctions; prestige and power; the criteria of status evaluation; and the consequences of class for social relationships, lifestyles, and personality development. Offered on a regular basis.

SOCI(ANTH) 6450. Sociopolitical Ecology. 3 hours.

The relationship between humans and the environment; ecological and social theories about environmental policies and problems. Offered fall semester.

SOCI 6470. Deviance and Social Control. 3 hours.

Theories and research on the nature of deviant behavior and its control by social institutions, agencies, and groups. Offered every even-numbered year on a regular basis.

SOCI 6490. Studies in Microsociology. 3 hours.

Research and theoretical perspectives on how humans are affected by social structures and how they create the structures that shape and direct behavior. Particular emphasis on symbolic interactionism. Perception, identity, socialization, deviance and social control, power and inequality, and the linkage between microscopic and macroscopic levels of analysis. Offered every year on a regular basis.

SOCI 6500. Sociology of the Political Economy. 3 hours.

The balance of political power between classes, races, and nations, as it shapes the economic forces that determine social order and the success or failure of social change. Not offered on a regular basis.

SOCI 6600. Research Methods. 3 hours.

Sociological research methods. Topics include conceptions of research, the philosophy of science, formal and grounded theory construction, and qualitative and quantitative approaches to research design. Offered fall semester.

SOCI 6620. Analysis and Interpretation of Sociological Data I. 3 hours.

Univariate, bivariate, and multivariate analyses of non-experimental quantitative evidence. Topics include frequency distributions, central tendency and dispersion, cross tabulation, mean difference analyses, statistical inference, regression, and the use of microcomputers and statistical software to conduct quantitative data analysis. Offered spring semester.

SOCI 6630. Analysis and Interpretation of Sociological Data II. 3 hours.

Prerequisite: SOCI 6620 or permission of department.

Multivariate data analysis; the design and execution of an independent research project using such techniques. Offered fall semester.

SOCI 6700. Survey Research Methods. 3 hours.

The procedures, methods, and problems of survey data collection. Topics include the historical development of survey research; sources of error in surveys; sampling; formatting questionnaires and interviews; and interviewing techniques. Offered every odd-numbered year on a regular basis.

SOCI 6750. Qualitative Methods of Social Research. 3 hours.

Prerequisite: Permission of department.

Qualitative approaches to research, with an emphasis on participant observation, intensive interviews, and analysis of text. Students must complete a major fieldwork project. Offered every even-numbered year on a regular basis.

SOCI 6800. Sociology of Work and Industry. 3 hours.

Theories and research on work, industry, and organizations. Topics include the impact of organizations and workplaces on employees; models of management and control; and recent transformations in work and work organizations. Offered every even-numbered year on a regular basis.

SOCI 6810. Sociology of Crime. 3 hours.

The nature, extent, and correlates of crime; theories of criminal behavior and victimization. Offered every even-numbered year on a regular basis.

SOCI 6830. Sociology of Law. 3 hours.

The nature of law, and the ways the legal system reflects its broader social context. Offered every year on a regular basis.

SOCI 6850. Sociology of Occupations. 3 hours.

Occupational choice, socialization, careers, and professionalization; contemporary issues concerning women and work, minorities and work, the consequences of bureaucratic and technological changes, and the impact of work on non-work behavior. Offered every odd-numbered year on a regular basis.

SOCI 6950. Sociology of Organizations. 3 hours.

The impact of organizational structure on the lives and attitudes of employees; centralization, control, power, and accountability in workplaces; the role of gender in organizations. Offered every even-numbered year on a regular basis.

SOCI 7000. Master's Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

SOCI 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

SOCI 8000. Special Topics in Sociology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Theory and research on advanced topics selected by the student. Non-Traditional Format: Directed study. Offered fall and spring semesters.

SOCI 8010. Seminar in Culture. 3 hours.

Approaches to culture, including the critical traditions of Frankfurt and Birmingham; the Durkheimian tradition of collective memory and social integration; and interactionist emphases on cultural products and structuration. Offered every odd-numbered year on a regular basis.

SOCI 8200. Seminar in Sociological Theory and Research. 3 hours. Repeatable for maximum 9 hours credit.

Selected topics on theory and research. Not offered on a regular basis.

SOCI 8230. Seminar in Critical Theory. 3 hours.

Critical social theory from its origins in Germany in the 1920s to its present development in Europe and the United States. Includes Frankfurt theorists such as Horkheimer, Marcuse, and Adorno; second-generation Frankfurters, especially Habermas; and contemporary critical theories of identity, culture, justice, and politics. Offered every even-numbered year on a regular basis.

SOCI 8280. Seminar in Gender Stratification. 3 hours.

Prerequisite: SOCI 6280 or WMST 7010 or permission of department.

Research and theories of gender equality and inequality in America and other cultures. Topics include gender stratification in public and private domains, and the intersection of gender with race, ethnicity, social class, and sexual orientation. Offered every even-numbered year on a regular basis.

SOCI 8450. Seminar in Theory Construction. 3 hours.

Theory construction and empirical inquiry, including an application of model-building concepts to specific research selected by the student. Offered every odd-numbered year on a regular basis.

SOCI 8500. Seminar in Political Sociology. 3 hours.

Issues of class, gender, and race. Topics include power and state formation; competing paradigms

of state action; the relationship between the state and economy; collective action; democratization, legitimacy and revolution. Not offered on a regular basis.

SOCI 8510. Seminar in Organizations and Social Control. 3 hours.

Prerequisite: SOCI 6470 or SOCI 6800 or SOCI 6950.

Organizational processes that control behavior, including work performance, career development, and off-job attitudes, orientations, and behaviors. Offered every odd-numbered year on a regular basis.

SOCI 8630. Empirical Model-Building in Social Research. 3 hours.

Prerequisite: SOCI 6630 or STAT 6220 or permission of department.

Simultaneous equations and confirmatory factor methods to evaluate structural and measurement models. Emphasis on the interplay between theory and the construction and evaluation of empirical models. Offered every even-numbered year on a regular basis.

SOCI 8730. Theories of Social Psychology. 3 hours.

Major classic and contemporary theories, including Freudian theory, exchange theory, dramaturgy, phenomenology, and ethnomethodology. Offered every even-numbered year on a regular basis.

SOCI 8820. Communities and Crime. 3 hours.

Urban crime and spatial variation in crime rates. The impact of crime on the structure of communities and its role in neighborhood decline. Not offered on a regular basis.

SOCI 8830. Violence and Society. 3 hours.

Theory and research on the relationship between criminal violence and social structures and processes. Offered every odd-numbered year on a regular basis.

SOCI 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

SOCI 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Speech Communication

Donald L. Rubin, *Head*

Thomas M. Lessl, *Graduate Coordinator,*
542-3259

(Terrell Hall)

The Department of Speech Communication offers programs leading to the PhD and MA degrees. PhD candidates select either an interpersonal communication track or a rhetoric track.

During their first year of study, students in the rhetoric track take SPCM 8200 and SPCM 8010 (1 hr.) in the Fall semester and SPCM 8300 in the Spring. Students in the interpersonal track take SPCM 8500 and SPCM 8010 (1 hr.) in the Fall semester and SPCM 8700 in the Spring semester. Additional requirements for PhD candidates include: (1) research skills, (2) competence in two areas within communication, (3) four hours of SPCM 8050, taken during the first four semesters in the program, (4) comprehensive examinations, and (5) dissertation.

Requirements for the MA in speech communication include: (1) SPCM 8200, SPCM 8500, SPCM 8010 (1 hr.), and SPCM 8020 (1 hr.) in the Fall semester and either SPCM 8300 or SPCM 8500 in the Spring semester of the first year of study (2) four hours of SPCM 8050, one per semester, (3) thesis, and (4) final oral examination on both the program of study and the thesis.

SPCM 4310/6310. Communication Strategies in Government. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

Communication strategies and activities in the executive and legislative branches of local, state, and national government. Case study approach incorporated into the class. Offered fall semester of even-numbered years.

SPCM 4340/6340. Communication and Religion. 3 hours.

The nature and practice of communication in a variety of religious traditions. Notions of sacred symbolism, myth, revelation, hermeneutics, and apologetics are especially emphasized. Offered on a regular basis.

SPCM 4370/6370. Women and United States Public Discourse. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

History and criticism of speeches by United States women in nineteenth- and twentieth-century social reform movements, especially woman's rights and feminism. Offered every year on a regular basis.

SPCM(HPRB) 4610/6610. Health Communication. 3 hours.

Communication about health with physicians and other providers, within support groups and health care organizations, and by public figures, groups, and organizations. Offered fall semester.

SPCM 6320. Political Campaign Communication. 3 hours.

The role communication plays in deciding which candidates will run for office, the nomination of candidates, and the election of candidates to office. Not offered on a regular basis.

SPCM 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

SPCM 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

SPCM 8010. Seminar in Communication Education. 1-3 hours. Repeatable for maximum 6 hours credit. 0-2 lectures and one lab period of 2 hours per week.

Teaching speech communication in postsecondary institutions, including communication training in organizations. Learner variables, such as communication apprehension, sociolinguistic diversity, and motivations for adult learning. Instructional strategies, including evaluation, technology use, and curriculum organization. Projects in analysis of instructional discourse and evaluation of learning outcomes. Non-Traditional Format: Students can elect to take the course as a lab/discussion only for a single credit, or they can elect to enroll in the lecture section as well for up to two additional credits. Offered fall semester.

SPCM 8050. Research Practicum in Communication. 1 hour. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research apprenticeship conducted under faculty supervision. Non-Traditional Format: Collab-

orative research conducted with varying time commitments from week to week. Offered fall, spring, and summer semesters.

SPCM 8200. Seminar in Rhetorical Theory. 3 hours.

Rhetorical theory in classical, modern, and contemporary times. Offered fall semester.

SPCM 8210. Seminar in Classical Rhetorical Theory. 3 hours.

Rhetorical thought in the Graeco-Roman world, from the older Sophists to St. Augustine. Non-Traditional Format: Independent research under the direction of faculty members. Not offered on a regular basis.

SPCM 8220. Seminar in Argumentation. 3 hours.

Examines argument from a rhetorical perspective focusing on reasoning as it occurs in a variety of public settings. Not offered on a regular basis.

SPCM 8230. Contemporary Rhetorical Theory. 3 hours.

Influential twentieth-century scholarship in rhetorical theory, emphasizing a communication orientation. Offered fall semester.

SPCM 8240. Legal Communication. 3 hours.

Communication issues and skills which affect lawyers, judges, litigants, and jurors in criminal and civil justice. Particular attention is given to a survey of research related to verbal and nonverbal communication as applied to legal interviewing, negotiation, pretrial tactics, and litigation. Offered fall semester of even-numbered years.

SPCM 8300. Seminar in Rhetorical Criticism. 3 hours.

Analysis, evaluation, and practice of approaches to rhetorical criticism of public discourse. Offered fall semester.

SPCM 8310. Topics in Public Address. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: (SPCM 8200 and SPCM 8300) or permission of department.

Research, analysis, and evaluation of selected topics of public address. Not offered on a regular basis.

SPCM 8330. Topics in Rhetorical Theory. 3 hours. Repeatable for maximum 9 hours credit.

Specific areas of research of rhetorical theory from various eras. May focus on an author (e.g., Kenneth Burke, Michel Foucault, or St. Augustine) or a subject area (e.g., rhetoric and social change or rhetoric and culture or stylistics). Not offered on a regular basis.

SPCM 8340. Methodologies of Rhetorical Criticism. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: (SPCM 8200 and SPCM 8300) or permission of department.

A particular approach to rhetorical criticism, such as feminist criticism, Burkean criticism, or cross-cultural criticism. Not offered on a regular basis.

SPCM 8500. Seminar in Interpersonal Communication Theory. 3 hours.

Prerequisite: Permission of department.
Theories of interpersonal communication. Familiarizes students with the breadth, scope, and range of communication theories. Develops skills in theory development, hypothesis formation, and model building. Provides skills necessary to read and evaluate scholarly publications in speech communication. Offered fall semester.

SPCM 8510. Seminar in Nonverbal Communication. 3 hours.

Empirical and theoretical research that focuses on the major communicative functions of nonverbal behavior and cues. Particular emphasis is placed on research projects that focus on the impression management functions of nonverbal communication. Students examine contemporary impression management efforts in politics, the courtroom, and related contexts. Offered fall semester of odd-numbered years.

SPCM 8520. Seminar In Communication and Social Influence. 3 hours

Familiarizes students with issues related to communication and social influence. Parameters of social influence, theories of social influence that emphasize communication processes, source and audience characteristics, message and channel properties, and attitudinal outcomes. Offered on a regular basis.

SPCM(LING) 8530. Language and Communication Behavior. 3 hours.

Surveys linguistic aspects of human interaction. Examines language patterns such as orality, intensity, immediacy, and power. Analyzes conversational data as well as language structures in public messages. Not offered on a regular basis.

SPCM 8540. Relational Communication. 3 hours

Issues and research related to communication in personal relationships. Issues and studies related to attraction, relational development, relational maintenance and repair, critical events in relationships, and relational termination. Offered spring semester of even-numbered years.

SPCM 8610. Seminar in Health Communication. 3 hours.

The multiple discourses and processes involved in communication about health. Advanced analysis of theories and research involved in the processes of naming, blaming, and shaming. Not offered on a regular basis.

SPCM 8700. Social Scientific Research Methods In Speech Communication. 3 hours.

Topics covered include formalizing research questions, conceptual definitions, operational definitions, measurement, hypothesis testing, sampling, research designs, and computer assisted data analysis. Offered spring semester.

SPCM 8800. Seminar in Intercultural Communication. 3 hours.

The study of communication within and between diverse cultural groups. Examines communicative nature of social identity, effects of world view on communication, nonverbal and verbal codes, varying relational patterns, and rhetoric situated in varying cultures. An applied research project will be conducted. Offered fall semester of even-numbered years.

SPCM 8990. Directed Study and Special Topics in Speech Communication. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.
Individual directed study or research in selected areas of speech communication conducted under the supervision of a faculty member. Offered fall, spring, and summer semesters.

SPCM 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.
Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

SPCM 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.
Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Statistics

William P. McCormick, *Head*
Jaxk H. Reeves, *Graduate Coordinator*,
542-3316
(Statistics Building)

The Department of Statistics offers a Master of Science (MS) degree in statistics, a Doctor of Philosophy (PhD) degree in statistics, and a Master of Applied Mathematical Science (MAMS) degree. The MS degree has two options, one in applied statistics and the

other in mathematical statistics. In both options, preparation of an MS thesis is optional. The thesis option requires a minimum of 27 semester hours of graduate credit exclusive of thesis and the non-thesis option requires a minimum of 33 semester hours. The PhD degree requires basic core course work equivalent to the mathematical statistics option of the MS degree plus work in advanced probability and inference; otherwise, the student can select advanced course work according to his own special interests.

Graduate students in the department may expect to have assignments that include teaching, applied research and consulting experience in addition to their course work and the basic research experience involved in completing their dissertation. A close association exists between the University Computer Center and the Department of Statistics and thus the computational facilities of the center are available to graduate students for the more complex or lengthy computations. In addition, the department maintains computational and data preparation laboratories, including its own computer system of thirty Sun Workstations and thirty supermicro-computers. Three labs containing Sun Workstations, ATs, a sparc 20 file-server and a sparc 10 computer server provide the user with the versatility of in-house computing.

Courses in advanced calculus and linear algebra are required as prerequisites for all graduate students in statistics.

STAT 4100/6100. Applied Stochastic Processes. 3 hours.

Not open to students with credit in STAT 4720/6720 or STAT 8700.

Prerequisite: MATH 2500.

Stochastic processes including discrete, continuous and conditional probability concepts. Definitions and properties of stochastic processes. Markov processes and chains, basic properties, transition matrices and steady state properties. Reliability renewal and queueing processes, expected waiting times, single and multiserver queues. Offered fall semester of odd-numbered years.

STAT 4230/6230. Applied Regression Analysis. 3 hours.

Prerequisite: STAT 4220 or STAT 6220 or permission of department.

Applied methods in regression analysis. Topics include univariate linear regression, techniques of multiple regression and model building, ANOVA as regression analysis, analysis of covariance, model selection and diagnostic checking techniques, nonlinear regression, and logistic regression. Offered spring and summer semesters.

STAT 4240/6240. Sampling and Survey Methods. 3 hours.

Prerequisite: STAT 4210 or STAT 6210.

Design of finite population sample surveys. Stratified, systematic, and multistage cluster sampling designs. Sampling with probability proportional to size. Auxiliary variables, ratio and regression estimators, non-response bias. Offered fall semester.

STAT 4260/6260. Statistical Quality Assurance. 4 hours.

Prerequisite: STAT 4220 or STAT 6220.

Basic graphical techniques and control charts. Experimentation in quality assurance. Sampling issues. Other topics include process capability studies, error analysis, SPRT, estimation and reliability. Offered fall semester.

STAT 4270/6270. Least Squares Methods. 3 hours.

Prerequisite: STAT 4210 and MATH 2500.

Least squares techniques using matrices. Techniques of matrix algebra and calculus applied to regression and experimental designs. Offered spring semester.

STAT 4280/6280. Applied Time Series Analysis. 3 hours.

Prerequisite: STAT 4510/6510.

Autoregressive, moving average, autoregressive-moving average, and integrated autoregressive-moving average processes, seasonal models, autocorrelation function, estimation, model checking, forecasting, spectrum, spectral estimators. Offered fall semester.

STAT 4290/6290. Nonparametric Methods. 3 hours.

Prerequisite: STAT 4210.

Techniques and applications of nonparametric statistical methods, estimates, confidence intervals, one sample tests, two sample tests, several sample tests, tests of fit, nonparametric analysis of variance, correlation tests, chi-square test of independence and homogeneity, sample size determination for some nonparametric tests. Offered spring semester.

STAT 4360/6360. Statistical Programming in SAS. 3 hours.

Prerequisite: STAT 4220 or STAT 6220 or STAT 4230/6230.

Statistical programming techniques, data manipulation, and presentation of analyses using SAS software package. Offered spring semester.

STAT 4380/6380. Survival Analysis. 3 hours.

Prerequisite: [(STAT 4210 or STAT 6210) and STAT 4510/6510] or permission of department.

Methods for comparing time-to-event data, including univariate parametric and nonparametric procedures, regression models, diagnostics, group comparisons, and use of relevant statistical computing packages. Offered spring semester.

STAT 4510/6510. Mathematical Statistics I. 3 hours.

Prerequisite: MATH 2500.

Concepts and basic properties of some special probability distributions, independence, moment generating functions, sampling distributions of statistics, limiting distributions. Offered fall semester.

STAT 4520/6520. Mathematical Statistics II. 3 hours.

Prerequisite: STAT 4510/6510.

Methods and properties of point estimation, confidence intervals, minimum variance unbiased estimators, hypothesis testing, analysis of variance, linear regression. Offered spring semester.

STAT 4710/6710. Introduction to Probability Theory I. 3 hours.

Prerequisite: MATH 2500.

Probability axioms, combinatorial analysis, random variables, univariate and multivariate distributions, expectations, conditional distributions, independence, and laws of large numbers. Offered fall semester.

STAT 4720/6720. Introduction to Probability Theory II. 3 hours.

Prerequisite: STAT 4710/6710.

Central limit theorems, random walks, Markov chains and processes, Brownian motion, branching and renewal processes, diffusion processes and queueing processes and applications. Offered spring semester.

STAT 6210. Statistical Methods I. 3 hours.

Statistical models, descriptive statistics, random variables, probability distributions, concepts in statistical inference, estimation, confidence intervals, hypothesis testing, goodness-of-fit tests, contingency tables. Offered fall, spring, and summer semesters.

STAT 6220. Statistical Methods II. 3 hours.

Prerequisite: STAT 6210.

Regression analysis including simple linear regression, multiple regression, model checking and analysis of residuals, correlation and prediction, analysis of variance, completely randomized designs, randomized block designs, factorial designs, interaction and covariance analysis. Offered fall, spring, and summer semesters.

STAT 6310. Statistical Analysis I. 3 hours.

Prerequisite: Permission of department.

Statistical analysis, including principles of sampling and descriptive statistics, elementary probability and discrete random variables, normal distribution, sampling distributions, statistical inference and hypothesis testing for one and two samples, simple linear regression, basic nonparametrics, chi-squared tests. Offered fall and spring semesters.

STAT 6320. Statistical Analysis II. 3 hours.

Prerequisite: STAT 6310 or permission of department.

Statistical analysis, including multiple regression, model building and selection, regression diagnostics, nonlinear regression, completely randomized designs, randomized block designs, factorial designs, general linear models, analysis of covariance, split plot designs, repeated measures analyses, and use of relevant statistical computing packages. Offered fall and spring semesters.

STAT 6810. Probability Distributions. 3 hours.

Prerequisite: Permission of department.

Probability laws, distribution functions and expectations, random variables and statistical distributions, joint distributions and conditional expectations, order statistics, Markov chains, Poisson process, Brownian motion, renewal theory, queueing theory. Offered fall semester.

STAT 6820. Statistical Inference. 3 hours.

Prerequisite: STAT 6810.

Principles of data reduction, completeness, ancillarity. Point estimation; methods of estimation. Evaluation of estimators; C-R lower bound, efficiency, hypothesis testing: N-P tests, UMP tests, interval estimation; coverage probabilities and confidence sets. Offered spring semester.

STAT 7000. Master's Research. 1-9 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

STAT 7100. Technical Report. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

For use with the professional master's degree in the Applied Mathematical Sciences. Non-Traditional Format: Students doing technical report work for the professional Masters of Applied Mathematical Sciences Degree will meet with their assigned faculty members as needed. Offered fall, spring, and summer semesters.

STAT 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

STAT 7770. Graduate Assistantship Teaching in Statistics. 1-5 hours. Repeatable for maximum 60 hours credit.

Prerequisite: Permission of department.

Provides graduate teaching assistants with knowledge of pedagogical approaches and available support systems for teaching statistics courses. Special sections are reserved for international students, with focus on use of language, pedagogy, and cultural aspects of teaching in this country. Offered fall and spring semesters.

STAT 8000. Supervised Statistical Consulting. 3 hours. Repeatable for maximum 6 hours credit. Prerequisite: STAT 8260.

Statistical consulting skills needed to deal with clients, formulate statistical models, explain analyses, use standard statistical computer packages, and write reports in language understandable to the client. Offered fall, spring, and summer semesters.

STAT 8040. Environmental Statistics. 3 hours. Prerequisite: STAT 4220 or STAT 6220 or STAT 6320.

Methods for sampling the environment and subsequent analysis of resulting data are considered. Emphasis is placed on design-based analysis and spatial data analysis. Special topics include environmental variables, environmental toxicology, and long-term trend detection. Offered spring semester.

STAT 8060. Computing Techniques in Statistics I. 3 hours.

Prerequisite: STAT 4510/6510 and STAT 6220.

Algorithms for computer generation of discrete and continuous univariate and multivariate random variates. Finite population sampling algorithms. Poisson processes. Variance reduction techniques. Analysis of simulated data. Offered fall semester.

STAT 8070. Computing Techniques in Statistics II. 3 hours.

Prerequisite: STAT 8060.

A continuation of Computing Techniques in Statistics I. Resampling methods. Markov-chain simulation techniques. Numerical integration. Optimization techniques. Data augmentation methods. Selected topics in advanced statistical computation. Offered spring semester of even-numbered years.

STAT 8090. Statistical Analysis of Genetic Data. 3 hours.

Prerequisite: (STAT 4220 or STAT 6220) and STAT 4510/6510.

Common statistical and genetic models appropriate for analyzing genetic data, especially DNA sequence data. Emphasis on fitting models, estimating parameters, and making inferences based on genetic data. Offered spring semester of even-numbered years.

STAT 8170. Probability Theory I. 3 hours.

Prerequisite: MATH 4100/6100.

Measurable spaces and measures, Lebesgue-Stieljes measure, independence, almost sure and in probability convergence, integration in probability spaces, product measures, absolute continuity of measures, weak law of large numbers, strong law of large numbers, weak convergence. Offered fall semester.

STAT 8180. Probability Theory II. 3 hours.

Prerequisite: STAT 8170.

Central limit theorem and Lindeberg-Feller theorem, stable laws, infinitely divisible laws, conditional expectations, Martingales, almost sure convergence for martingales, uniform integrability, Markov chains, Brownian motion, Skorokhod's representation and Donsker's theorem. Offered spring semester.

STAT 8200. Design of Experiments for Research Workers. 3 hours.

Prerequisite: STAT 4220 or STAT 6220 or STAT 6320.

Methods for constructing and analyzing designed experiments are considered. Concepts of experimental unit, randomization, blocking, replication, and orthogonal contrasts are introduced. Designs include completely randomized design, randomized complete block design, Latin squares design, split-plot design, repeated measures design, and factorial and fractional factorial designs. Offered fall and spring semesters.

STAT 8210. Multivariate: Theory and Methods. 3 hours.

Prerequisite: STAT 6320.

Relevant matrix theory, multivariate random vectors, exact and asymptotic distributions, multivariate normal distribution (MVN), Q-Q plots, sampling from MVN and inference for population mean vector, covariance matrix, correlation matrix, MANOVA, principal component analysis, factor analysis, discriminant analysis and classification and clustering. Offered spring semester.

STAT 8220. Clinical Trials. 3 hours.

Prerequisite: STAT 6320.

Drug development and NDA approval procedures; randomization; blindness; phase I-IV clinical trials; multicenter trials; bioequivalency; sample size determination; design and analysis; cross-over design; repeated measurements design; survival analysis; meta analysis. Offered spring semester of odd-numbered years.

STAT 8240. Sampling and Related Topics. 3 hours.

Prerequisite: STAT 4240/6240 and STAT 6820.

Prerequisite or corequisite: STAT 8210 and STAT 8260.

Recent development in model-based estimation in survey sampling. A super population approach to inference on finite population quantities will be taken. Both Bayesian and classical approaches to sampling and related applications including small area estimation will be emphasized. Offered spring semester of even-numbered years.

STAT 8250. Multivariate Methods. 3 hours.

Prerequisite: STAT 6220.

The relevant matrix theory, multivariate random vectors and their distributions, multivariate normal distribution (MVN), sampling from MVN and inference for population mean vector, covariance matrix, correlation matrix, multivariate ANOVA, principal component analysis, factor analysis, discriminant analysis and classification. Offered fall semester.

STAT 8260. Theory of Linear Models. 3 hours.

Prerequisite or corequisite: STAT 6820 and STAT 8210.

The Gauss-Markov model is introduced. Topics include estimability, parameter estimation, analysis of variance, hypothesis testing, restricted models, reparameterization, two-part model, correlated data, and fixed, mixed and random effects models. Offered spring semester.

STAT 8270. Spatial Statistics. 3 hours.

Prerequisite: STAT 4520/6520 and STAT 8260.

Theoretical foundations of spatial statistics, models for spatial data, and methods for model fitting, statistical inference, and spatial prediction are considered. Analysis of lattice data, images, continuous spatial variation and spatial point patterns. Offered spring semester of even-numbered years.

STAT 8280. Time Series Analysis. 3 hours.

Prerequisite: STAT 4520/6520 or STAT 6820.

Linear processes, autoregressive-moving average models, predication, parameter estimation, model fitting and testing. Offered fall semester of odd-numbered years.

STAT 8290. Advances in Experimental Designs. 3 hours.

Prerequisite: STAT 6320 and STAT 8260.

Historical and recent advances in experimental design are considered. Designs including factorial, fractional factorial, central composite, incomplete block, cyclic, row-column, and simplex are discussed. Response surface and mixture models are considered. Optimal designs for linear and nonlinear models are developed. Not offered on a regular basis.

STAT 8300. Multivariate Analysis. 3 hours.

Prerequisite: STAT 6820 and STAT 8210.

Selected topics in the theory of multivariate analysis at an advanced level. Not offered on a regular basis.

STAT 8330. Advanced Applications and Computing. 3 hours.

Prerequisite: STAT 8200.

Basics of S programming language, objects in S+, graphics in S+, smoothing techniques and data summaries, linear models, generalized linear models, modern nonlinear regression techniques, multivariate statistics, survival analysis. Offered spring semester of odd-numbered years.

STAT 8530. Advanced Statistical Inference I. 3 hours.

Prerequisite: STAT 6820.

Prerequisite or corequisite: STAT 8170.

Exponential families; more on sufficiency, completeness, ancillarity, and UMVUE; C-R lower bound and Fisher information for single and multiparameter cases; equivariance; large sample theory; likelihood estimation and asymptotic efficiency. Offered fall semester.

STAT 8540. Advanced Statistical Inference II. 3 hours.

Prerequisite: STAT 8530.

Theory of uniformly most powerful tests, unbiased tests, and invariant tests, maximin tests, confidence sets, asymptotic theory for standard large sample likelihood based tests, theory of linear rank tests. Offered spring semester.

STAT 8550. Asymptotic Inference. 3 hours.

Prerequisite: STAT 8540.

Local asymptotic normality and its applications; M-estimation; minimum distance methods; robust inference; quasilikelihood and applications to generalized linear models; kernel density estimation; adaptive estimators and tests with applications to proportional hazard models. Offered fall semester.

STAT 8560. Advanced Theory of Nonparametric Statistics. 3 hours.

Prerequisite: STAT 8540.

Nonparametric estimation and hypothesis testing, relative efficiency, exchangeable random variables, ranking and distribution free statistics, generalized U-Statistics, generalized linear rank statistics, limiting distributions of certain nonparametric statistics, density estimation and related topics. Not offered on a regular basis.

STAT 8570. Statistical Decision Theory. 3 hours.

Prerequisite: STAT 8530.

Essential elements of decision theory, game theoretic approach, minimax theorem, Bayesian Inference and decision rules, admissibility and minimaxity results, minimax estimation of normal

and Poisson means, multiple decision problems, gamma-minimaxity. Not offered on a regular basis.

STAT 8600. Ranking and Selection: Theory and Methods. 3 hours.

Prerequisite: STAT 4520/6520 or STAT 6820.

Selecting the best populations and treatments; indifference zone and subset selection approaches; multiple comparisons; nonparametric selection; bayesian selection; estimation of ordered parameters. Not offered on a regular basis.

STAT 8620. Advanced Statistical Applications I. 3 hours.

Prerequisite: STAT 6320 and STAT 6820.

Review of standard discrete distributions and generating functions, two-way and higher-dimensional contingency tables, chi-squared and other goodness-of-fit tests, binary response models, log-linear models, multinomial response models, introduction to generalized linear models. Offered fall semester.

STAT 8630. Advanced Statistical Applications II. 3 hours.

Prerequisite: STAT 8260 and STAT 8620.

Theoretical foundations for the generalized linear model are introduced. Applications to Gaussian, binary, polytomous, and counts data are considered. Topics include hierarchical model building, estimation algorithms, analysis of deviance, and diagnostics. Extensions include overdispersed data, mixed generalized linear models, longitudinal data, and spatial data. Offered spring semester.

STAT 8650. Bootstrapping Techniques. 3 hours.

Prerequisite: STAT 8530.

The jackknife and bootstrap, bootstrap confidence intervals, pivoting, asymptotic validity and invalidity, bootstrap accuracy and Edgeworth expansions, bootstrap for regression and autoregression, bootstrapping Markov chain models, moving block bootstrap for general weakly dependent data. Offered spring semester of odd-numbered years.

STAT 8700. Applied Stochastic Processes. 3 hours.

Prerequisite: STAT 4720/6720.

Discrete time Markov chains, continuous time Markov chains, queueing processes, renewal processes, Markov random fields, point processes, Brownian motion and diffusion. Offered spring semester of odd-numbered years.

STAT 8730. Sequential Analysis. 3 hours.

Prerequisite: STAT 6820.

Prerequisite or corequisite: STAT 8170 and STAT 8530.

Stopping times, optional stopping theorem, Anscombe's theorem, renewal theorem and as-

sociated results, SPRT for simple and composite hypotheses, nonlinear renewal theory, sequential point and interval estimation. In addition to these topics, current results from the literature will be presented. Offered fall semester of even-numbered years.

STAT 8900. Special Topics in Statistics. 3 hours. Repeatable for maximum 27 hours credit.

Prerequisite: Permission of department.

Selected topics concerning recent developments in statistics. Offered fall, spring, and summer semesters.

STAT 8910. Statistical Seminar. 1-3 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Seminar topics in statistics. Non-Traditional Format: Meeting times for the statistical seminar will vary with topic. Typical meeting times for seminars are one or one and one-half hours per week. Some seminars will meet twice a week, and individual meetings with faculty are occasionally used. Offered fall, spring, and summer semesters.

STAT 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

STAT 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Women's Studies

Patricia Del Rey, *Director*

542-2846

(230K Main Library)

Please see the Index for information on the certificate program in women's studies. The courses having a women's studies prefix are listed below.

WMST 4010/6010. Introduction to Feminist Theories. 3 hours.

Prerequisite: Undergraduate level only: (WMST 1110 or WMST 2010) and permission of department.

The historical origins, philosophical assumptions, and political implications of contemporary feminist theories, including conservative, liberal, radical and ecological feminist theories. Offered fall, spring, and summer semesters.

WMST 4120/6120. Biology and Politics of Women's Reproduction. 3 hours.

Prerequisite: Undergraduate level only: Permission of department.

Women's reproductive life cycles from the perspective of evolutionary biology and the political theory of radical feminism. Topics include puberty, sexual cycling, menarche, pregnancy, childbirth, and menopause. Feminist critiques of science are explored. Offered fall semester.

WMST 4250/6250. Special Topics in Women's Studies. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: WMST 4010/6010 or permission of department.

Ongoing and current topics of scholarly interest in women's studies. Offered fall and spring semesters.

WMST 7010. Women and the Construction of Knowledge. 3 hours.

Prerequisite: WMST 4010/6010 or permission of department.

Women's approaches to thinking, learning, and the production of knowledge; inclusiveness of academic disciplines to women's lives and experiences; the question of whether distinct feminist methods exist within academic disciplines; and women's status as participants in disciplines and universities. Offered spring semester.

WMST 7050. The Political Economy of Gender in Third World Societies. 3 hours.

Prerequisite: Permission of department.

Conceptual and methodological tools of analysis to gender and development issues in Third World societies of Africa, Asia, Latin America, and the Caribbean. Use of case studies to explore similarities in gender-related experiences and strategies of resistance and empowerment. Offered fall semester of odd-numbered years.

WMST 7060. Black Women's Narratives. 3 hours.

Prerequisite: Permission of department.

Theoretical and methodological issues in the study and use of black women's narratives. The course also focuses on how gender, ethnicity, culture, class, and sociohistorical context are reflected in various kinds of narrative texts. Offered fall semester of even-numbered years.

WMST 7100. Lesbian and Gay Studies. 3 hours.

Prerequisite: Permission of department.

Investigation of same-sex desire, heterosexuality, homosexuality, and the regulation of sexual iden-

ties across different racial/ethnic and class/regional communities. Focusing on Native American, African American, Latino, Asian American, and international studies, with texts from law, anthropology, history, film, fiction, and theory. Offered spring semester.

WMST 7950. Directed Research in Women's Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: WMST 4010/6010 and permission of department.

Readings and independent research closely supervised by a faculty member on a specified interdisciplinary topic in women's studies. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

WMST 8020. Seminar in Advanced Feminist Theory. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: WMST 4010/6010 or permission of department.

Seminar covering topics of scholarly interest in advanced feminist theory. Offered spring semester of odd-numbered years.

The C. Herman and Mary Virginia Terry College of Business

P. George Benson, Dean

Kay L. Keck, *Academic Coordinator of Graduate Studies, 542-5671*
(Brooks Hall)

Eight graduate degree programs are offered by the Terry College of Business: the Master of Business Administration, Master of Accountancy, Master of Marketing Research, Master of Arts in business administration and in economics, Master of Applied Mathematical Science, and Doctor of Philosophy in business administration and in economics. The MBA, MAcc, and MMR degrees lead to professional and managerial careers. The MA programs are used for further specialization or as a path to the PhD. The PhD programs lead to research and/or teaching careers.

The one-year MBA and MMR programs admit students in the summer only. The two-year MBA program admits students in the fall only. All other programs in the Terry College of Business admit students each semester.

MBA

The MBA degree requires two years for students without undergraduate preparation in business administration and one year for students entering with an AACSB accredited BBA degree. Broadly speaking, the MBA program provides a mixture of practical and theoretical studies to prepare the student to become a first-rate managerial problem-solver in either the private or the public sector. Through its curriculum and faculty research, the program exposes the student to the thought processes necessary to fulfill important business roles in a rapidly changing environment.

The program's basic objectives are:

1. To provide a basic analytical tool kit for management, including fundamental concepts and principles from the various management disciplines, and an understanding of the major institutions in business and government.
2. To develop skill in using these tools in an imaginative, orderly, problem-solving capacity.
3. To advance the ability to make and carry out decisions.
4. To develop a basis for dealing effectively with others, in person and in writing.
5. To encourage continuous learning from experience.
6. To instill a thorough understanding of today's economic, political, and social environment.

The first year consists of core course work. These courses introduce tools, concepts, and techniques for managerial decision making in the basic areas of business. Courses include accounting, finance, production management, information systems, ethics, statistics, economics, legal environment of business, marketing, and organizational behavior, negotiations, and management strategy. The second year consists of sequence and elective course work and the MBA P.L.U.S. Program.

The one-year MBA consists of three consecutive semesters of course work. Core courses are taken during the summer term. During the rest of the year, the student takes sequence courses, electives, and the MBA P.L.U.S. Program.

Each student must take at least six hours in two areas of specialization. Six electives are available to gain additional breadth or depth in the concentration. A calculus course is a prerequisite for enrollment. Please refer to the MBA brochure for additional program information.

MMR

The MMR program prepares students for professional careers in marketing research and marketing intelligence. Students entering this selective program usually have degrees in business or marketing, although entrance is available to students in other

majors who meet a set of five prerequisite business courses. Criteria for admission include: GMAT score, GPA, work experience or internships, references, and a personal interview. The program involves 12 months of coursework followed by a six-month paid internship. For a brochure and application packet contact the MMR website at <http://www.cba.uga.edu/mmr/>.

Macc

The MAcc program is designed to prepare students for professional careers in financial accounting, public sector accounting, auditing, managerial accounting and controller-ship, information systems, or taxation. Students usually enter this program after having earned a baccalaureate degree. However, the currently enrolled accounting majors at the University of Georgia may enter at the beginning of the senior year, in which case the student will earn both a baccalaureate and master's degree.

MA

The MA programs enable students to secure a working knowledge in business administration or economics. After satisfying undergraduate foundation requirements, the student, counseled by a major professor, designs a program of at least 24 semester hours built around a research field. The thesis and course work represent an integrated program of study. Master of Arts programs are offered in economics, finance, management, management sciences, real estate, and risk management and insurance.

PhD

The PhD programs provide a background for careers in government, business, academia, and research. The doctoral program is individually planned for each student by the major professor and advisory committee. There is no foreign language requirement. Students in the PhD in Business Administration develop a high level of competency in a major field of business, a minor field, and a research methodology. In addition, all students must have knowledge of

mathematics through differential and integral calculus. Programs leading to the PhD in Business Administration are offered in:

- Accounting
- Business Finance
- Management Information Systems
- Management Sciences
- Marketing
- Human Resource Management
- Production/Operations Management
- Real Estate
- Risk Management and Insurance
- Strategic Management

The PhD in Economics is offered with emphasis on microeconomic theory, macroeconomic theory, and two of the following fields:

- Financial Economics
- Econometrics
- Economic Development
- Economic History
- Industrial Organization
- International Economics
- Labor Economics
- Monetary Economics
- Public Finance
- Productivity Analysis

Accounting

Russell M. Barefield, *Director*
 Jennifer J. Gaver, *Graduate Coordinator*,
 (PhD), 542-3699
 Russell M. Barefield, *Graduate*
Coordinator, (Macc), 542-1616
 (Brooks Hall)

ACCT 5030/7030. Advanced Financial Accounting. 3 hours.

Prerequisite: ACCT 5020.

Application of accounting theory to complex business entities, including accounting for equity investments, business combinations, and international operations. Accounting for not-for-profit organizations. The preparation of consolidated financial statements, including the use of electronic spreadsheets. Offered on a regular basis.

ACCT 5100/7100. Managerial Accounting I. 3 hours.

Prerequisite: ACCT 1130H.

The design of accounting systems to serve the internal needs of management with an emphasis

on underlying theory. Product costing, including activity-based costing; budgeting and other planning applications, information for decision making, planning and control application for decentralized organizations. Offered on a regular basis.

ACCT 5200/7200. Audit/Systems I. 3 hours.

Prerequisite: ACCT 5020 and ACCT 5100/7100. Assurance services with focus on the audit of financial statements. The basic financial statement audit process is discussed including the concepts of evidence, materiality, and risk. The role of professional ethics and legal liability in the auditing profession. Offered on a regular basis.

ACCT 5310/7310. Audit/Systems II. 3 hours.

Prerequisite: ACCT 2102.

Accounting information systems (AIS), including the role of such systems in an organization, electronic data processing, AIS applications, AIS analysis and design, AIS controls, and the audit of AIS. Offered on a regular basis.

ACCT 5400/7400. Taxation I. 3 hours.

Prerequisite: ACCT 2102.

A basic federal income tax course covering concepts of taxation applicable to all taxable entities but primarily relating to individuals. Introduces research approaches to tax problems as well as methods of analysis most appropriate to taxation issues. Offered on a regular basis.

ACCT 5410/7410. Taxation II. 3 hours.

Prerequisite: ACCT 5400/7400.

The federal taxation of business entities and owners, primarily focusing on corporations and shareholders. The tax provisions governing business entities, as well as the impact of those provisions on business decisions and choice of entity form. Offered on a regular basis.

ACCT 5420/7420. Partnership Taxation. 3 hours.

Prerequisite: ACCT 5730/7730 and permission of department.

The fundamental tax and legal concepts involved in the income taxation of partnerships and partners. Offered on a regular basis.

ACCT 5430/7430. Estate and Gift Taxations. 3 hours.

Prerequisite: ACCT 5730/7730 and permission of department.

The structure and fundamental concepts involved in estate and gift taxation and the income taxation of estates and trusts. Personal financial planning concepts are also introduced. Offered on a regular basis.

ACCT 5440/7440. Corporate Tax I. 3 hours.

Not open to students with credit in ACCT 5410/7410.

Prerequisite: ACCT 5400/7400.

The federal taxation of business entities and owners, primarily focusing on corporations and shareholders, for students planning to pursue a concentration in taxation. Offered on a regular basis.

ACCT 5730/7730. Tax Policy and Research. 3 hours.

Prerequisite: ACCT 5400/7400 and permission of department.

Development of tax research tools and the development of an understanding of tax policy issues as they arise in social policy and professional accounting settings. Offered on a regular basis.

ACCT 5740/7740. Accounting Policy and Research. 3 hours.

Prerequisite: ACCT 5200/7200 and permission of department.

Development of accounting research tools and an understanding of accounting policy issues as they arise in social policy and professional accounting settings. Offered on a regular basis.

ACCT 5800/7800. Internship/Cooperative Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Applied professional experience or experience with the profession in another culture. Non-Traditional Format: Relevant professional work experience that augments topics covered in regular classes. Offered on a regular basis.

ACCT 7990. Financial Accounting. 3 hours.

Concepts of accounting, the basic structure of financial statements, the interpretation of corporate annual reports and limitations of such reports. Offered on a regular basis.

ACCT 8050. Financial Statement Analysis. 3 hours.

Prerequisite: ACCT 5010 or ACCT 8150.

Basic techniques, research methods, strengths, and limitations of financial statement analysis. Computer analysis of financial data to predict earnings and other financial ratios. Use of these techniques to value equity securities and to predict takeover targets, future debt ratings, and bankruptcies. Offered on a regular basis.

ACCT 8100. Managerial Accounting II. 3 hours.

Prerequisite: ACCT 5100/7100.

Advanced cost and managerial accounting topics. Application of cost and managerial accounting techniques to "real world" problems. Offered on a regular basis.

ACCT 8140. Internal Uses of Accounting Information. 2 hours.

Prerequisite: ACCT 7990.

Basic concepts and techniques applicable to the internal uses of accounting information. Emphasis is placed on planning and control applications,

but some attention is given to product costing issues. Offered on a regular basis.

ACCT 8150. Survey of Accounting. 1.5 hours.
Prerequisite: Permission of department.

Financial and managerial accounting for students with prior accounting course work or experience. Basic accounting concepts, techniques pertinent to understanding corporate financial statements and techniques applicable to the use of accounting information for planning and controlling business operations.

Offered on a regular basis.

ACCT 8200. Audit/Systems III. 3 hours.

Prerequisite: ACCT 5200/7200 and ACCT 5310/7310.

Advanced auditing topics with emphasis placed on the practical aspects of auditing financial statement transaction cycles and account balances. Students will complete a practice case, including the drafting of the audit report. Offered on a regular basis.

ACCT 8300. Systems. 3 hours.

Prerequisite: ACCT 5310/7310.

Design, installation, and applications of particular accounting information systems. Offered on a regular basis.

ACCT 8440. Corporate Tax II. 3 hours.

Prerequisite: ACCT 5440/7440 or permission of department.

Tax and legal concepts involved in the taxation of corporations and in the taxation of entities changing to or from a corporate form of organization. Offered on a regular basis.

ACCT 8490. Tax Implications of Business Decisions. 3 hours.

Prerequisite: ACCT 8140 or ACCT 8150.

The major provisions of the federal income tax law that impact management decisions in all types of business entities. Offered on a regular basis.

ACCT 8700. Special Topics in Accounting. 3 hours.

Prerequisite: Permission of department.

Advanced topics of current interest in auditing, financial accounting, managerial accounting, systems, or taxation. Offered on a regular basis.

ACCT 8990. Directed Study in Accounting. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed study or research in the area of accounting. Non-Traditional Format: Directed readings or study under the direction of a faculty member done independently of regularly scheduled classes. Offered on a regular basis.

ACCT 9000. Doctoral Research. 1-12 hours.

Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

ACCT 9010. Accounting Workshop. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Critical examination and development of research projects of departmental faculty, doctoral students, and visiting scholars. Non-Traditional Format: Attendance at, and participation in, accounting workshops where research results are presented and discussed. Offered on a regular basis.

ACCT 9030. Documentation and Presentation of Accounting Research Results. 1 hour.

Prerequisite: Permission of department.

Publication issues related to accounting research. Offered on a regular basis.

ACCT 9100. Behavioral Accounting Research. 3 hours.

Prerequisite: Permission of department.

Judgement and decision-making research in accounting and auditing, including the roles of experience, cognitive processes, group processes, and decision aids. Offered on a regular basis.

ACCT 9110. Positive Accounting Research. 3 hours.

Prerequisite: Permission of department.

The use of accounting information in contracts, the associated incentives for earnings management, and other related topics. Offered on a regular basis.

ACCT 9120. Capital Markets Research in Accounting. 3 hours.

Prerequisite: Permission of department.

The information content of accounting information as reflected in changes in security prices and trading volume in financial markets, and other related topics. Offered on a regular basis.

ACCT 9130. Special Topics in Accounting Research. 3 hours.

Prerequisite: Permission of department.

Contemporary topics in accounting research. Offered on a regular basis.

ACCT 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Banking and Finance

James A. Verbrugge, *Head*
Joseph F. Sinkey, *Graduate Coordinator*,
542-3649
(Brooks Hall)

FINA 4280/6280. Small Business Finance. 3 hours.

Prerequisite: FINA 3000.

Principles of small business finance and the raising and management of venture capital, financial planning, forecasting, capital budgeting, working capital management, and sources of capital. This course is aimed at students planning careers in either small business management or in small business consulting. Offered on a regular basis.

FINA 4810/6810. International Finance. 3 hours.

Prerequisite: FINA 3000.

International business decision making emphasizing the effects of internationalized financial and non-financial markets. Exchange rate analysis, hedged costs of funds, economic exposure and management, capital budgeting, financial and corporate strategy, and the evaluation of international risks and returns. Offered on a regular basis.

(FINA)AAEC 4870/6870. Futures and Option Markets. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

Development, functions, and importance of futures and option markets. Futures and option contracts; issues such as speculation, the roles of commission houses, commodity exchanges, and clearinghouses; and the use of future contracts as instruments for financing business activities. Technical and fundamental trading theories. Offered fall and spring semesters.

FINA 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

FINA 8000. Financial Management. 3 hours.

Not open to students with credit in FINA 8010.

Intensive analysis of financial decision-making in the firm, emphasizing both investment and financing decisions. Analytical tools of finance are introduced. Valuation concepts, risk-return analy-

sis, project valuation, capital structure, and corporate financing. Offered on a regular basis.

FINA 8010. Financial Management. 1.5 hours.

Not open to students with credit in FINA 8000.

Financial decision-making in the firm, emphasizing both investment and financing decisions. Analytical tools of finance are introduced. Valuation concepts, risk-return analysis, project valuation, capital structure, and corporate financing. Offered on a regular basis.

FINA 8100. Corporate Financial Management. 3 hours.

Tools and concepts in corporate finance. Students are required to analyze situations, make value maximizing decisions, and communicate the basis of those decisions. Financial analysis and planning, capital budgeting, evaluation of financing alternatives, company valuation, dividend policy, mergers, and capital structure decisions. Offered on a regular basis.

FINA 8110. Theory of Corporate Finance. 1.5 hours.

Important theoretical contributions in corporate finance and the empirical tests of those theories. A framework is developed for understanding a broad range of important corporate financial decisions. Substantial emphasis is placed on the determinants of corporate financing and payout policies. Offered on a regular basis.

FINA 8140. Mergers, Restructuring, and Corporate Control. 1.5 hours.

The dynamics of control within corporations and the role of the market for corporate control in leading to economic restructuring and shifts in resource allocation by corporations. Mergers and acquisitions, asset sales, restructuring, leverage buyouts, and bankruptcy. Offered on a regular basis.

FINA 8160. Venture Capital Financing. 1.5 hours.

Venture capital in financing entrepreneurial growth companies. How venture capital is raised, invested, and then harvested for reinvestment. How professional venture capitalists analyze and structure potential investments. How and when portfolio companies should execute initial public offerings. Offered on a regular basis.

FINA 8300. Investments. 3 hours.

Financial assets and markets including the efficient markets hypothesis. The role of risk in asset pricing, the implications of asset pricing models, the capital asset pricing model, the arbitrage pricing model, and theories of valuation for both stocks and fixed income securities. Offered on a regular basis.

FINA 8310. Advanced Speculative Markets. 1.5 hours.

The economics of financial futures and options markets. Advanced theory of hedging with speculative financial instruments. Offered on a regular basis.

FINA 8340. Portfolio Management. 1.5 hours. Prerequisite: FINA 8300.

The active management of portfolios consisting of domestic and international securities. The estimation of portfolio inputs, the construction of desirable portfolios, and the evaluation of portfolio performance. Selected cases are analyzed by the students. Offered on a regular basis.

FINA 8360. Financial Engineering. 1.5 hours. Prerequisite: FINA 8300 and FINA 8310.

The use of derivative securities to achieve financial goals. Specific cases involve the use of derivatives and other financial innovations to reduce risk, lower the cost of financing, improve portfolio yields, or help the corporate firm achieve strategic goals. Students analyze, present, and critique cases. Offered on a regular basis.

FINA 8430. Financial Markets. 1.5 hours.

The evolving roles of financial intermediaries, regulation, and capital markets in the financing of American businesses and the provision of savings and payments mechanisms for individuals. The securitization of traditional loan products and the determinants of the term structure of interest rates. Offered on a regular basis.

FINA 8450. Management of Financial Institutions. 1.5 hours.

Measurement and management of risk in financial services firms. Management of risks associated with interest rates, credit, liquidity, and exchange rates. Attention is devoted to commercial banks, pension funds, investment banks, and other firms. A financial institution decision game is typically included in the course. Offered on a regular basis.

FINA 8810. International Financial Management. 3 hours.

International business decision making with an emphasis on the relationship between decisions and markets. The determinants of exchange rates, hedged costs of funds, transaction and economic exposure management, capital budgeting, corporate strategy, and swaps. The course makes extensive use of cases. Offered on a regular basis.

FINA 8990. Directed Study in Finance. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. The most recent professional contributions in the various special fields of finance. Student and instructor interests determine which particular field is brought under scrutiny. Non-Traditional Format:

Directed study not involving formal lecture or lab. Offered on a regular basis.

FINA 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

FINA 9100. Mathematical Finance. 3 hours.

Prerequisite or corequisite: ECON 8910 or permission of department.

Selected tools from continuous time finance and fundamental concepts in the analysis of stochastic processes. These tools are applied to the pricing of derivative securities—especially forward futures, and option contracts. Binomial and finite difference approximations to continuous time processes are also used to price derivatives. Offered on a regular basis.

FINA 9110. Valuation and Capital Market Theory. 3 hours.

Prerequisite: FINA 9100 and ECON 8010 and ECON 8070.

Prerequisite or corequisite: ECON 8080. Theory emphasizing valuation and capital markets. A mathematical development of the major asset pricing theories: the capital asset pricing model (CAPM), arbitrage pricing theory, the pricing of contingent claims, and the intertemporal CAPM. Related topics include expected utility maximization, mean-variance analysis, and efficient markets. Offered on a regular basis.

FINA 9120. Empirical Research in Corporate Finance. 3 hours.

Prerequisite: FINA 9100 and ECON 8000 and ECON 8010 and ECON 8070.

Prerequisite or corequisite: FINA 9110. Empirical research in corporate finance. The modern theories of capital structure, dividend policy, corporate control, investment banking, and capital budgeting, emerging areas of research such as market microstructure, venture capital financing, and comparative international corporate finance. Offered on a regular basis.

FINA 9130. Financial Research Methodology. 3 hours.

Prerequisite: FINA 9120 and ECON 8080. The data bases and empirical methodologies used in performing financial research. Event study and regression methodologies in corporate finance research and investment-oriented methodologies such as factor and principal components analyses. Students gain experience in presentation of research and in refereeing papers. Offered on a regular basis.

FINA 9200. Corporate Finance Theory. 3 hours.

Prerequisite: Permission of department.

Theoretical constructs underlying corporate finance, illustrated with both theoretical seminal and current research. Theoretical topics will include optimization, non-cooperative game theory, information economics, and agency theory. Signaling, screening, incentive design, product market structure, research and development, security issuance, bankruptcy, and market microstructure. Offered on a regular basis.

FINA 9210. Empirical Research in Investments. 3 hours.

Prerequisite: Permission of department.

The markets, trading systems, and properties of financial securities. Includes an investigation of market efficiency and the time series properties of securities. Empirical studies of asset pricing models, portfolio performance, term structure models, and capital market integration. Offered on a regular basis.

FINA 9230. Research Topics in Finance. 3 hours.

Prerequisite: Permission of department.

Advanced topics in finance. The content is flexible with the material based on recent advances in finance. Possible course topics include "Financial Markets and Institutions" and "Game Theory with Applications to Finance and Economics." Offered on a regular basis.

FINA 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor.

Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Economics

Charles DeLorme, *Interim Head*

Arthur A. Snow, *Graduate Coordinator,*

542-3752

(Brooks Hall)

ECON 4350/6350. Industrial Economics. 3 hours.

Prerequisite: ECON 4010.

Firms' performances and conduct toward rival firms, suppliers, and customers under different market structures, including perfect competition and monopoly. The rationale and consequences of antitrust regulation and other public policies. Offered on a regular basis.

ECON 4400/6400. Economics of Public and Regulated Enterprises. 3 hours.

Prerequisite: ECON 4010.

The economic analysis of regulated and nationalized industries and organizations, with emphasis on the regulation of electric, natural gas, and telecommunications enterprises. Methods and implications of privatization of traditionally "public" enterprises are also considered. Offered on a regular basis.

ECON 4450/6450. Economic Analysis of Law. 3 hours.

Prerequisite: ECON 4010.

An efficiency-based perspective on major areas of the law, including contract, tort, and nuisance law, which points to the reduction of transactions costs as a unifying legal principle. Offered on a regular basis.

ECON 4650/6650. Economics of Organizations and Management. 3 hours.

Prerequisite: ECON 4010.

Decision making within firms and public organizations, using standard microeconomic tools. Transaction costs and the size of the firm, the compensation and motivation of workers, mergers and corporate control, team production, and the theory of bureaucracy. Offered on a regular basis.

ECON 7000. Master's Research. 1-6 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

ECON 7300. Master's Thesis. 3-6 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

ECON 8000. Mathematical Analysis for Economists. 3 hours.

Mathematical methods and economic applications of selected topics in optimization theory, including comparative statistics analysis, duality and envelope results, inequality constraints and Kuhn-Tucker theory. Offered on a regular basis.

ECON 8010. Microeconomic Theory I. 3 hours.

The theory of consumer behavior, the analysis of production and cost, and the determination of output level and input mix of the profit-maximizing firm under perfect competition and monopoly. Offered on a regular basis.

ECON 8020. Microeconomic Theory II. 3 hours.

Prerequisite: ECON 8000 and ECON 8010.

Welfare economics, including the concepts of Pareto efficiency and consumer surplus and the analysis and measurement of welfare costs of public goods, externalities, and other "market failures." Offered on a regular basis.

ECON 8030. Microeconomic Theory III. 3 hours.

Prerequisite: ECON 8020.

The general equilibrium framework of microeconomics is developed and then extended to allow for the passage of time and the presence of uncertainty. Game-theoretic considerations are also considered. Offered on a regular basis.

ECON 8040. Macroeconomic Theory I. 3 hours. Prerequisite: ECON 8000 and ECON 8010.

Theories of national income, unemployment, inflation, and interest and exchange rates. The implementation, and domestic and global repercussions, of alternative monetary and fiscal policies. Offered on a regular basis.

ECON 8050. Macroeconomic Theory II. 3 hours.

Prerequisite: ECON 8040.

Dynamic, stochastic models of macroeconomic behavior, including neoclassical and endogenous models of economic growth and New Classical and New Keynesian models of the business cycle. Offered on a regular basis.

ECON 8060. Macroeconomic Theory III. 3 hours.

Prerequisite: ECON 8050.

Macroeconomics, with emphasis on theory or applied time-series methods. Endogenous growth theory, real and New Keynesian business cycle theories, vector autoregression, long-memory processes, and multiple-equilibrium and heteroskedasticity models. Offered on a regular basis.

ECON 8070. Statistics for Econometrics. 3 hours.

The statistical foundations of econometrics, including probability, random variables, sampling, expectation, distribution functions, parametric and conditional distributions, independence, functions of random variables, and maximum likelihood. Offered on a regular basis.

ECON 8080. Introduction to Econometrics. 3 hours.

Prerequisite: ECON 8070.

Linear regression models, with special attention to estimator properties and hypothesis testing under various statistical assumptions. Least-squares, maximum likelihood, and method-of-moments estimation procedures and seemingly unrelated regressions and simultaneous equation models. Offered on a regular basis.

ECON 8110. Econometrics I. 3 hours.

Prerequisite: ECON 8080.

Advanced econometric techniques, including full-information estimation of simultaneous equation models, generalized methods of moments estimation and specification testing, dynamic regression models, vector autoregressions, cointegration, and estimation and inference using panel data. Offered on a regular basis.

ECON 8120. Econometrics II. 3 hours.

Prerequisite: ECON 8110.

The theoretical properties of maximum likelihood estimators and their use in overcoming shortcomings of the classical linear model. Computer algorithms are developed and used to compute maximum-likelihood estimators for logit, probit, tobit, sample-selectivity, and failure time models. Offered on a regular basis.

ECON 8210. Industrial Economics I. 3 hours.

Prerequisite: ECON 8010.

The structure, conduct, and performance of suppliers and customers in product and geographic markets. Topics treated include recent industry studies, consequences of technological change, the role of property rights and transactions costs, and federal and state public utility and antitrust regulations. Offered on a regular basis.

ECON 8220. Industrial Economics II. 3 hours.

Prerequisite: ECON 8030.

Industrial economics, with emphasis on game-theoretic models of strategic behavior, contracting and agency theory, transaction costs, property rights, and the boundaries of the firm. Recent theoretical contributions are also covered, with empirical applications and illustrations. Offered on a regular basis.

ECON 8310. Public Economics I. 3 hours.

Prerequisite: ECON 8010.

Market failures involving public goods and externalities, and methods for measuring and reducing their efficiency costs, together with analysis of taxation and income-redistribution policies and discussion of collective choice theories, including social choice and public choice paradigms. Offered on a regular basis.

ECON 8320. Public Economics II. 3 hours.

Prerequisite: ECON 8010.

The effects of taxes on economic decision making by individuals and businesses, with discussions of alternative tax systems, tax evasion and avoidance, social insurance programs, and issues in fiscal federalism. Offered on a regular basis.

ECON 8410. Labor Economics I. 3 hours.

Prerequisite: ECON 8010.

The neoclassical economic theory of the market and nonmarket allocation of individuals' time. Labor demand and supply, human capital investment, unions, discrimination, public sector labor

markets, the distribution of earnings and income, and unemployment. Offered on a regular basis.

ECON 8420. Labor Economics II. 3 hours.

Prerequisite: ECON 8010.

Labor economics, with special emphasis on current theoretical and empirical issues. The demand for and supply of labor, compensating wage differentials, the structure of compensation, worker displacement, unemployment, and the distribution of labor-market income. Offered on a regular basis.

ECON 8510. International Economics I. 3 hours.

Prerequisite: ECON 8010.

A general equilibrium treatment of commodity and intra-industry trade, international capital mobility, and immigration, with treatments of alternative government policies including free trade, import tariffs and subsidies, export taxes and subsidies, quotas, and voluntary export restraints. Offered on a regular basis.

ECON 8520. International Economics II. 3 hours.

Prerequisite: ECON 8010.

Commodity-market imperfections and trade policy, including discussion of the implications of increasing returns to scale technology, commodity-trade restrictions, and the location of economic activities for international trade policy. Offered on a regular basis.

ECON 8610. Monetary Economics I. 3 hours.

Prerequisite: ECON 8040.

Monetary and banking theory, emphasizing the microfoundations of monetary exchange and bank intermediation, the determinants of money supply and demand, and the macroeconomic consequences of monetary shocks and bank failures. Offered on a regular basis.

ECON 8620. Monetary Economics II. 3 hours.

Prerequisite: ECON 8040.

The evolution and workings of commodity and fiat-monetary regimes, with discussions of alternative regimes, discretionary central bank behavior, and externality, natural monopoly, and time-consistency issues in money and banking. Offered on a regular basis.

ECON 8710. Economic History. 3 hours.

Prerequisite: ECON 8040.

United States history through cliometrics, which applies economic theory and econometrics to historical data. The course draws on recent cliometric research as well as on more traditional studies of economic history. Offered on a regular basis.

ECON 8720. Topics in Economic History. 3 hours.

Prerequisite: ECON 8010.

Current research topics in historical economics, aimed at a deeper understanding of these topics

and of modern cliometric techniques for examining them as demonstrated in recent scholarly writings. Topics will reflect student interests and current research trends. Offered on a regular basis.

ECON 8810. Economic Growth and Development. 3 hours.

Prerequisite: ECON 8040.

Exogenous and endogenous growth theories for market economies, addressing regional growth-rate differences, and of determinants of economic development including economic structures, environmental policies, and diet. Offered on a regular basis.

ECON 8820. The Analysis of Productivity. 3 hours.

Prerequisite: ECON 8010.

Analytical techniques for assessing the sources of and measuring changes in productivity, with microeconomic and macroeconomic empirical applications. Offered on a regular basis.

ECON 8900. Survey of Business Economics. 1.5 hours.

Prerequisite: Permission of department.

Theories of consumer and producer behavior and models of market structure, with discussions of the nature of the firm and various aspects of government and business relations. For one-year MBA students. Offered on a regular basis.

ECON 8910. Business Microeconomics. 3 hours.

Prerequisite: Permission of department.

Develops the fundamental microeconomic concepts of scarcity, opportunity cost, and marginal utility along with standard models of the firm. These concepts and models are then used to shed light on the structure and performance of actual firms, with emphasis on problems faced by real-world managers. Offered on a regular basis.

ECON 8920. Business Macroeconomics. 2 hours.

Prerequisite: Permission of department.

The historical behavior and determinants of aggregate economic statistics including gross domestic product, the unemployment rate, the inflation rate, interest rates and exchange rates. Models are developed to explain cyclical and long-term variations in these statistics; and fiscal and monetary policies for improving their performance. Offered on a regular basis.

ECON 8930. MBA Tutorial. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Reading and independent research on a specified topic beyond normal MBA course offerings and supervised by a faculty member. Non-Traditional Format: Directed study. Students must

apply to the department head at least five weeks in advance. Offered on a regular basis.

ECON 8980. Economics Seminar. 1-3 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Lectures on and discussion of some selected topic in applied or theoretical economics, with an emphasis on recent published and unpublished research. Offered on a regular basis.

ECON 8990. Directed Study. 3 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Students investigate a research problem in their special field of study under the personal direction of their major professor. Non-Traditional Format: Directed study. Offered on a regular basis.

ECON 9000. Doctoral Research. 1-6 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

ECON 9300. Doctoral Dissertation. 1-6 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Insurance, Legal Studies, Real Estate, and Management Science

Sandra G. Gustavson, *Head*
Robert E. Hoyt, *Graduate Coordinator,*
Risk Management and Insurance
542-3808

James B. Kau, *Graduate Coordinator,*
Real Estate 542-9110

Ralph E. Steuer, *Graduate Coordinator,*
Management Sciences and Information
Technology 542-3782
(Brooks Hall)

Risk Management and Insurance

RMIN 5530/7530. Advanced Property Insurance. 3 hours.

Prerequisite: RMIN 5100 or permission of department.

Property risks facing businesses and the effective management of these risks with insurance. Practical application of property insurance to pure risk exposures, including direct and indirect property, inland marine, crime, boiler and machinery, and catastrophic property risks. Offered on a regular basis.

RMIN 5540/7540. Advanced Liability Insurance. 3 hours.

Prerequisite: RMIN 5100 or permission of department.

Liability risks facing businesses and the effective management of these risks with insurance. Practical application of liability insurance to pure risk exposures, including motor vehicle liability, professional and general liability, environmental liability, employment practices and workers' compensation, and fiduciary liability. Offered on a regular basis.

RMIN 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

RMIN 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

RMIN 8100. Fundamentals of Risk Management. 1.5 hours.

Fundamentals of risk management and insurance, with emphasis on risk financing through the use of insurance, retention, and non-insurance transfer agreements. Offered on a regular basis.

RMIN 8110. Employee Benefits. 1.5 hours.

The design, management, and financing of employee benefit plans. Topics include group life, group health, group disability, and retirement plans. Implications for employers and employees. Public and private approaches to provision of benefits. Regulatory and tax issues. Current topics in the field of employee benefits. Offered on a regular basis.

RMIN 8120. Corporate Risk Management. 3 hours.

Prerequisite: RMIN 8100.

The operational and financial risks faced by firms and the study of various methods of handling these risks, including loss prevention, risk retention, self-insurance, corporate insurance programs, and capital markets. Extensive use of cases. Offered on a regular basis.

RMIN 8990. Directed Study in Risk Management. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed study or research in risk management and insurance. Non-Traditional Format: Directed study.

Offered on a regular basis.

RMIN 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

RMIN 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

RMIN 9450. Property and Liability Insurance Seminar. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected topics in property and liability insurance. Special emphasis on academic research. Topics include loss reserves, adverse selection, insurer solvency, underwriting cycles, capital budgeting and property and liability insurance, property and liability rate regulation, and liability insurance issues. Offered on a regular basis.

RMIN 9550. Life and Health Insurance Seminar. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected topics in life and health insurance. Special emphasis on academic research. Topics include pensions, group health, moral hazard, demand for life insurance, industry structure and productivity, life insurance products and costs, disability insurance, and life insurer asset/liability management. Offered on a regular basis.

RMIN 9650. Risk Theory Seminar. 3 hours.

Prerequisite: Permission of department.

Risk theory and its applications including basic concepts of actuarial mathematics. Importance of

utility theory and ruin theory to modeling of the insurance process is investigated. Application of probability and statistical techniques to the analysis of pure losses and loss distributions. Offered on a regular basis.

Legal Studies

LEGL 4300/6300. Law of Business Organizations. 3 hours.

Prerequisite: LEGL 2700.

A managerial, entrepreneurial focus on the law applicable to forming partnerships, corporations and other business entities, raising capital and structuring relationships with agents, employees, partners, officers, and directors. Offered on a regular basis.

LEGL 4400/6400. Business Law. 3 hours.

Prerequisite: LEGL 2700.

Debtor-creditor relations, commercial paper, contracts, securities, agency, partnership, joint ventures, corporations, professional and legal responsibility, sales, secured transactions, bankruptcy. Offered on a regular basis.

LEGL 4500/6500. Employment Law. 3 hours.

Laws prohibiting employment discrimination based on race, gender (including sexual harassment), religion, national origin, age, and disability, with an emphasis on avoiding unnecessary liability. Offered on a regular basis.

LEGL 8000. Legal and Regulatory Environment of Business. 3 hours.

The interrelationship of business and the ordering of society through law. Emphasizes why legal duties come to be placed on business and how managers appropriately respond to these duties. Offered on a regular basis.

LEGL 8050. Negotiation. 1.5 hours.

Concepts and tools of integrative, interest-based negotiation. Offered on a regular basis.

LEGL 8100. Law for Managers. 1.5 hours.

Prerequisite: LEGL 8000.

Antitrust, employment discrimination, products liability, environmental laws, securities fraud, and other current legal issues facing business managers. Offered on a regular basis.

LEGL 8200. Negotiation and Conflict Resolution. 1.5 hours.

Prerequisite: LEGL 8050.

Complex negotiation simulations and interest-based conflict management systems, with emphasis on methods of recognizing and resolving underlying conflicts and resulting disputes. Offered on a regular basis.

LEGL 8300. Legal Aspects of Financial Institutions. 1.5 hours.

Prerequisite: LEGL 8000.

Legal issues facing regulated financial institutions, such as banks and credit unions. Offered on a regular basis.

LEGL 8400. International Legal Transactions for Business. 1.5 hours.

Prerequisite: LEGL 8000.

Laws, agreements, and institutions that affect international business transactions with particular emphasis on licensing, exporting, contract formation, dispute resolution, intellectual property rights, and cultural, political, and ethical problems. Non-Traditional Format: Course meets on half-semester. Offered on a regular basis.

LEGL 8990. Directed Study in Legal Studies.

1-15 hours. Repeatable for maximum 15 hours credit.

Research in Legal Studies.

Non-Traditional Format: Course involves independent work outside the traditional classroom format. Offered on a regular basis.

Real Estate

REAL 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

REAL 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

REAL 8070. Real Estate Development. 1.5 hours.

Development process with particular emphasis on analyzing the feasibility of design, location, and construction. Offered on a regular basis.

REAL 8800. Real Estate Analysis. 1.5 hours.

The basic principles of real estate law, markets, valuation, and finance. Designed for any graduate student with an interest in real estate decision making as well as a basis for more advanced courses. Offered on a regular basis.

REAL 8810. Real Estate Practice and Participants. 1.5 hours.

Prerequisite: REAL 8800.

Corequisite: REAL 9810.

Intended for real estate decision makers and managers in general. A series of seminars focusing on specific trends and challenges of contemporary real estate markets. The course is

uniquely designed to expose students to the best practices in the industry as well as the managers implementing those practices. Offered on a regular basis.

REAL 8990. Directed Studies in Real Estate. 1-

9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed study or research in real estate. Non-Traditional Format: Independent research outside the traditional classroom format. Offered on a regular basis.

REAL 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

REAL 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

REAL 9810. Real Estate Investments. 1.5 hours.

Prerequisite: REAL 8800.

An intensive case-oriented course in the real estate decision making process. Special emphasis is placed on value maximization in investment analysis. Carefully selected topics address the process as well as the risk and rewards of real estate investment from a local market to an international perspective. Offered on a regular basis.

REAL 9830. Real Estate Finance. 1.5 hours.

Application of theoretical aspects of financial economics to explain real estate financial institutions and markets. Financial and economic methods are applied to residential and commercial real estate. Special topics include real estate in a portfolio, agency problems, and the influence of the legal environment. Non-Traditional Format: Course meets one-half semester. Offered on a regular basis.

REAL 9850. Real Estate Markets. 1.5 hours.

Concentration on real estate markets with specific emphasis on understanding the market forces affecting real estate at the urban and regional levels. The main focus will be on providing insight into the operation of urban land and non-residential markets and the process of urban growth and regional development. Non-Traditional Format: Course meets one-half semester. Offered on a regular basis.

REAL 9860. Real Estate Valuation. 1.5 hours. Principles and techniques of appraising real estate with special emphasis on income producing real estate. The course provides an in-depth look at conventional valuation techniques in addition to modern valuation methods based on statistical inference. Special consideration is given to lease analysis and problems in applying the valuation techniques. Offered on a regular basis.

REAL 9870. Special Topics in Real Estate. 1.5 hours.

Advanced topics in real estate. Special emphasis on current issues in the real estate industry and the conceptual and analytical tools available for their analysis. The course is designed to provide practical experience through case analysis, site selection projects, and other forms of market analysis and research. Offered on a regular basis.

REAL 9910. Seminar in Real Estate Analysis and Finance. 1-6 hours. Repeatable for maximum 12 hours credit.

Selected topics in real estate analysis and finance. Topics include interest rate theory and mortgage financing, mortgage choice, secondary mortgage market, option theory, derivative assets, efficient market theory, default risk, mortgage insurance, agency problems, and risk management. Discussion of current research, proposal writing, and research methods. Offered on a regular basis.

REAL 9920. Seminar in Real Estate Markets and Investments. 1-6 hours. Repeatable for maximum 12 hours credit.

Selected topics in real estate market analysis, urban economics, and investments. Topics include real estate asset pricing, diversification, housing demand, information economics, agency theory, urban spatial structure, financial institutions, and urban public policy. Discussion of current research, proposal writing, and research methods. Non-Traditional Format: Ph.D. seminar context will vary based on student needs. Offered on a regular basis.

Management Sciences and Information Technology

MSIT 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department. Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

MSIT 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

MSIT 8000. Business Statistics. 1.5 hours.

Prerequisite: Permission of department.

Descriptive statistical measures, basic probability notions, estimation and hypothesis testing for the mean, proportion and variance in a population, linear regression models. Emphasis is on applications in a business environment. Computer is used throughout the course. Offered on a regular basis.

MSIT 8100. Applied Business Statistics. 3 hours.

Fundamental statistical tools and their use in business and economics. Goal of course is to ensure that students can select appropriate statistical tools and apply them correctly. Topics include sampling distributions, estimation, hypothesis testing, inferences on two populations, and simple and multiple regression. Offered on a regular basis.

MSIT 8130. Spreadsheet Modeling and Decision Analysis I. 3 hours.

Prerequisite: MSIT 8100.

The tools of quantitative analysis most frequently used in business, industry, and government. Spreadsheet modeling and applications in multiple regression, time series, forecasting, linear programming, network flows, and integer programming. Offered on a regular basis.

MSIT 8140. Spreadsheet Modeling and Decision Analysis II. 3 hours.

Prerequisite: MSIT 8130.

A continuation of Spreadsheet Modeling and Decision Analysis I. Spreadsheet modeling and applications in service systems subject to randomness, reliability, risk analysis, simulation analysis, discriminant analysis, neural networks and artificial intelligence, multi-criteria decision analysis, and quality. Offered on a regular basis.

MSIT 8150. Applied Mathematical Programming. 3 hours.

Prerequisite: MSIT 8130 or permission of department.

Models, theory and algorithms of linear, integer, and nonlinear programming. Use of the Solver capability in Excel along with instruction in Visual Basic to create add-in capabilities. Applications from within the functional areas of business permeate the course. Offered on a regular basis.

MSIT 8160. Multiple Criteria Decision Making. 3 hours.

Prerequisite: MSIT 8150 or permission of department.

Analytic hierarchy process (United States school) vis-a-vis methods from the European school of discrete alternative multi-criteria decision analysis, multiple objective programming, interactive procedures, computation, and enhancements derived from the application of neural networks and genetic algorithms. Offered on a regular basis.

MSIT 8210. Simulation. 3 hours.

Prerequisite: MSIT 8100 or permission of department.

Simulation as a tool for model analysis. Topics include random number and random variate generation, techniques for modeling complex systems, simulation program design, validation, implementation, applications in business. Assignments will involve computer exercises. Offered on a regular basis.

MSIT 8220. Applied Stochastic Models. 3 hours.

Prerequisite: STAT 4710/6710 or permission of department.

Stochastic models in management science, Markov chains, birth and death processes, applications to queuing and inventory models, reliability and maintenance models. Offered on a regular basis.

MSIT 8250. Network Flow Optimization Models in Business. 3 hours.

Prerequisite: MSIT 8150 or permission of department.

Models, theory, and algorithms for solving network flow optimization problems are presented. Data structural design and computer implementation issues are discussed along with the widespread usage of network models in business and industry. Offered on a regular basis.

MSIT 8470. Artificial Intelligence and Expert Systems in Management Science. 3 hours.

Prerequisite: MSIT 8140.

Artificial intelligence and expert systems applied to problems in management science. Artificial intelligence, focusing on the design, testing, validation, and use of expert systems in management science applications. Knowledge-acquisition is also discussed. Computer-based projects are employed to reinforce concepts. Offered on a regular basis.

MSIT 8990. Directed Study in Management Science. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Students conduct field study projects or individually investigate newly-breaking areas in the management sciences under faculty direction.

Non-Traditional Format: Directed study. Offered on a regular basis.

MSIT 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

MSIT 9150. Special Topics in Management Science. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Various topics in neural networks, genetic algorithms, fuzzy sets and fuzzy logic, tabu search, data envelopment analysis, chaos theory, and simulated annealing. Non-Traditional Format: Course will vary with needs of students. Offered on a regular basis.

MSIT 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Management

Archie B. Carroll, *Head*

Richard T. Watson, *Graduate Coordinator*,
542-3706
(Brooks Hall)

MGMT 6080. Management Information Systems Overview. 1.5 hours.

The use of information systems technology by managers and professionals to improve organizational performance, group work, and personal productivity. Decision support software and database query systems are used to support a case-based approach to learning. For students in the one-year MBA program. Non-Traditional Format: For four weeks (offered only in summer). Offered summer semester.

MGMT 6090. Management Information Systems. 2 hours.

Use of information systems technology by managers and professionals to improve organizational performance, group work, and personal productivity. Decision support software and database query systems are used to support a case-based approach to learning. For students in the two-year MBA program. Offered fall semester.

MGMT 7000. Master's Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

MGMT 7010. Developing Leadership Skills. 3 hours.

Leadership skills necessary for managerial work. Class activities are varied, including experiential exercises, discussions, case analyses, and collaborative learning. Activities focus on leadership skills, such as self-awareness, stress management, decision-making, feedback, listening, power and influence, motivation, empowerment, building effective teams, and self-leadership. Offered on a regular basis.

MGMT 7210. Materials Management. 3 hours.

Prerequisite: Permission of department.

Management of dependent and independent demand inventory items within a manufacturing environment and the examination of the management of finished good items within a distribution environment. Emphasis is placed on a systems perspective. Offered on a regular basis.

MGMT 7220. Project Management. 3 hours.

Prerequisite: Permission of department.

Planning, scheduling, organizing, implementing, and controlling of single and multiple projects. This course explores traditional and new techniques for the dynamic environment of project management. Offered on a regular basis.

MGMT 7230. Purchasing Management. 3 hours.

Prerequisite: Permission of department.

Purchasing and related functions (traffic, receiving, and surplus material). The relationships among price, quality, and delivery service. Japanese purchasing philosophy is contrasted to the United States philosophy in conjunction with techniques of negotiation, sourcing, value analysis, and engineering. Offered on a regular basis.

MGMT 7280. Simulation in Operations Management. 3 hours.

Prerequisite: Permission of department.

Network-based, discrete-event simulation in analyzing operations-based, business-related problems. Emphasis is on problem formulation, solution development, and analysis of output. Offered on a regular basis.

MGMT 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent

research and thesis preparation. Offered on a regular basis.

MGMT 7400. Strategic Management and Communication. 3 hours.

Prerequisite: Permission of department.

Applied strategic management theory combined with the development of communication skills for their effective application. Strategies for the development and maintenance of resources likely to yield competitive advantage, and the communication skills needed to present and elucidate those strategies to other constituents within and outside the organization. Offered on a regular basis.

MGMT 7420. Business, Society, and Stakeholder Management. 3 hours.

Prerequisite: Permission of department.

The business and society relationship, including an analysis of corporate social performance. A strategic management and public policy perspective is employed in examining the relationship between business and key stakeholders, including governments, consumers, employees, community, and the natural environment. Offered on a regular basis.

MGMT 7440. Business and Corporate Strategy. 3 hours.

Prerequisite: Permission of department.

Issues, concepts, and tools for formulating business and corporate strategies that will enable organizations to achieve their goals and objectives effectively and efficiently. Key concepts include industry evaluation, resource-based strategy, sustainable competitive advantage, experience curve analysis, sensitivity analysis, and key success factor analysis. Offered on a regular basis.

MGMT 7460. Managing Change and Innovation. 1.5 hours.

Prerequisite: Permission of department.

Managing constant change inherent in modern business, whether driven by technological, environmental, or human innovations. Includes conceptual and theoretical perspectives, as well as practical applications of modern frameworks for managing change. Offered on a regular basis.

MGMT 7500. Entrepreneurship and New Venture Formation. 3 hours.

Prerequisite: Permission of department.

Contributions that new ventures and small businesses make to the economy and society as a whole; the characteristics of successful entrepreneurs; the process of starting up new businesses; and the primary determinants of new venture and small business performance. Offered on a regular basis.

MGMT 7510. Developing Successful Business Plans. 3 hours. One 3-hour lab period.

Prerequisite: Permission of department.

Key tasks involved in creating successful business plans and different ways in which each task may be accomplished. The primary course activity involves the preparation of a business plan for a "prospective" new venture. Offered on a regular basis.

MGMT 7530. Small Business Management. 3 hours.

Prerequisite: Permission of department.

Examines the special challenges facing small businesses in today's society. Integrates from a general management perspective the functional knowledge gained in the areas of finance, economics, human resource management, marketing, and operations in order to help prepare the student to manage such businesses. Offered on a regular basis.

MGMT 7560. International Strategic Management. 3 hours.

Prerequisite: Permission of department.

The formulation and implementation of integrated corporate strategy by multinational business organizations. The planning, direction, and control of the many flows linking the multinational company to its affiliates while operating within a plurality of political, economic, and sociocultural systems. Offered on a regular basis.

MGMT 7580. Management of Nonprofit Organizations. 3 hours.

Prerequisite: MGMT 3000 or permission of department.

Management of nonprofit organizations, from the entrepreneurship of start-up ventures to the evolving missions of established nonprofits. Specific attention is given to board roles, resource development, and fundraising, as well as to the history and legal basis of the nonprofit sector. Offered on a regular basis.

MGMT 7600. Organizational Memory Technology. 3 hours.

Issues and principles of managing organizational data. Concepts and skills for developing, accessing, and administering each technology. Extensive experience in developing data models, relational databases, and formulating and executing complex queries. Offered on a regular basis.

MGMT 7620. Rapid Application Development. 3 hours.

Prerequisite: MAN 7600 or permission of department.

Use of rapid application development (RAD) techniques such as prototyping and end-user development for quickly creating information system applications. Offered on a regular basis.

MGMT 7630. The Systems Approach. 3 hours.

The systems approach is a viewpoint that conceptualizes institutions as organized complexities, i.e., as organic (open) systems. Exemplified

by the development of a general systems theory and cybernetics. The theories and findings of such interdisciplinary research to the study of human organizations. Offered on a regular basis.

MGMT 7640. Networking Technology. 1.5 hours.

The application of data communications and networking technology to support the organizational information systems mission. Communication architectures and protocols, along with current commercial offerings, equipment, software, network design principles, and network management techniques. Offered on a regular basis.

MGMT 7650. Electronic Commerce. 1.5 hours.

Electronic commerce and markets, including the use of the Internet and World Wide Web for commercial purposes. Development and management of websites and applications are covered in-depth. Offered on a regular basis.

MGMT 7670. Information Resource Management. 3 hours.

Administering the Information System/Resource activities in an organization. Computer-based resources and IS development and consulting activities. Issues include management of IS professionals, user-professional relationships, management of IS project teams, tracking emerging technologies, and planning processes. A sociotechnical perspective is emphasized to insure a balanced look at technical and people issues. Offered on a regular basis.

MGMT 7730. Decision Support Systems. 3 hours.

The building of decision support systems. Topics include the DSS concept, applications, organizational issues, hardware and software technology, developmental methodology, data-model-user relationships, implementation strategies, and evaluation procedures. Offered on a regular basis.

MGMT 7740. Knowledge-Based Systems in Business. 1.5 hours.

Prerequisite: MGMT 7730 or permission of department.

Knowledge-based systems are a subset of artificial intelligence that deal with computer applications that replicate the decision-making and problem-solving skills of experts. Students learn how to identify, build, implement and manage knowledge-based systems. Offered on a regular basis.

MGMT 7750. Executive Information Systems. 1.5 hours.

Prerequisite: MGMT 7730 or permission of department.

This course provides the student with an understanding of executive information systems (EIS). An EIS supplies an organization's executives with the information needed to perform their job responsibilities. Concepts, development approaches,

technologies, applications, and impacts. Offered on a regular basis.

MGMT 7760. Group Support Systems. 1.5 hours.
Prerequisite: MGMT 7730 or permission of department.

Collaborative computing, in particular group support systems (GSS), supports a group of people who work together on a common task. Concepts, development approaches, technologies, applications, and impacts. Offered on a regular basis.

MGMT 7770. Data Warehouses and Mining. 1.5 hours.

Prerequisite: MGMT 7730 or permission of department.

Data warehouses or large databases are used to support decision-making applications. Coverage includes concepts, development process, organizational issues, hardware, and software. The focus is on-line analytical processing (OLAP) and data mining to discover relationships in large databases. Offered on a regular basis.

MGMT 7780. Advanced Decision Support in Business. 1.5-3 hours.

Prerequisite: MGMT 7730 or permission of department.

Advanced topics in decision support and artificial intelligence. These include fourth generation languages, data warehousing, model building, model generation, and model management, data access, problem solving on novel computer architectures, fuzzy logic and sets, belief functions, neural computing and artificial intelligence, and intelligent agents. Offered on a regular basis.

MGMT 7790. Advanced Artificial Intelligence in Business. 3-6 hours.

Prerequisite: MGMT 7740 or permission of department.

Advanced topics in artificial intelligence. These include search reduction methods, such as genetic and Tabu Search algorithms, fifth generation languages, fuzzy logic and sets, belief functions, neural networks, and virtual reality. Offered on a regular basis.

MGMT 7800. Organizational Diagnosis and Intervention. 3 hours.

Prerequisite: MGMT 7010.

Methods for gathering and assessing information about problems affecting the performance of the organization (diagnosis), as well as designing interventions to correct the problems. Offered on a regular basis.

MGMT 7810. Organizational Design and Development. 3 hours.

Prerequisite: MGMT 7010.

The formal and informal structures within an organization. Topics include designing organizational structures, jobs, teams, and work-flow processes; aligning the design of structures with

organizational strategy; and assessing supporting relationships, such as decision-making and authority networks. Offered on a regular basis.

MGMT 8010. Integrated Resource Management I. 1.5 hours.

Not open to students with credit in MGMT 4000.

Traditional, total quality, just-in-time, and constraints management philosophies applied to services and manufacturing. Resource management is the integration of these philosophies and takes a systems perspective to long- and short-range planning, scheduling, executing, controlling, and measuring operations and related functions in providing effective business processes to achieve organizational goals. For one-year MBA students. Offered on a regular basis.

MGMT 8020. Integrated Resource Management II. 2 hours.

Not open to students with credit in MGMT 4000.

Traditional, total quality, just-in-time, and constraints management philosophies applied to services and manufacturing. Resource management is the integration of these philosophies and takes a systems perspective to long- and short-range planning, scheduling, executing, controlling, and measuring operations and related functions in providing effective business processes to achieve organizational goals. For two-year MBA students. Offered on a regular basis.

MGMT 8240. Quality Management. 3 hours.

Prerequisite: Permission of department.

Managerial, behavioral, technological, and statistical concepts as related to Total Quality Management (TQM). Quality, continuous improvement, and productivity are discussed. Focus is on understanding and being able to apply all the concepts throughout any organization (e.g., service, manufacturing, not-for-profit, and governmental). Offered on a regular basis.

MGMT 8250. Productivity Management. 3 hours.

Not open to students with credit in MGMT 4250.

Prerequisite: Permission of department.

Advanced personal, process, white collar, and organizational productivity concepts, issues, and measurement systems. Process management concepts are applied to cross-functional activities in services and manufacturing. Constraint management tools for problem identification, solution, and implementation are applied to productivity problems. Offered on a regular basis.

MGMT 8260. Service Operations Management. 3 hours.

Not open to students with credit in MGMT 4260.

Prerequisite: Permission of department.

Operations management's role in service sector organizational performance. The concepts, skills, and research issues necessary to provide a competitive advantage to the service organization.

Productivity improvement, quality of service delivery, work-force management, the impact of new technologies, and international issues. Offered on a regular basis.

MGMT 8270. Advanced Operations Management. 3 hours.

Not open to students with credit in MGMT 4260. Prerequisite: MGMT 8250 or permission of department.

Process management, constraint management, just-in-time, quality management and traditional management tools applied to cross-functional problems based on case studies and/or actual organization projects from services and manufacturers. Technical analyses, presentations, and writing skills are utilized. Constraint management logic-based analytical processes provide the problem-solving methodology. Offered on a regular basis.

MGMT 8990. Directed Study. 1-9 hours. Repeatable for maximum 40 hours credit.

Prerequisite: Permission of department.

Directed study in management or MIS topics giving particular attention to specialized problems in an area related to a student's academic interests. Non-Traditional Format: Directed study. Offered on a regular basis.

MGMT 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

MGMT 9010. Management Research Methodology. 3 hours.

Prerequisite: Permission of department.

The requirements that science places on management research. The importance of theory as a source of research questions, the role of constructs and variables, sampling, measurement, and the design of research to facilitate valid explanations of management phenomena. Offered on a regular basis.

MGMT 9020. Concepts of Organizations. 3 hours.

Prerequisite: Permission of department.

General exploration and analysis of the academic literature surrounding organizations. Offered on a regular basis.

MGMT 9030. Doctoral Research Seminar. 3 hours. Repeatable for maximum 9 hours credit.

Management research with particular emphasis on preparing students for research in different aspects of management. Offered on a regular basis.

MGMT 9280. Operations Management Research Seminar I. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Operations Management literature examining applicable research concepts, theories, and frameworks in the OM field. Offered on a regular basis.

MGMT 9290. Operations Management Research Seminar II. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Selected research topics focusing on providing an understanding of specific areas in the field of Operations Management (OM) and on identifying potential dissertation topics and areas for future research. Offered on a regular basis.

MGMT 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

MGMT 9400. Strategic Management Theory. 3 hours.

Prerequisite: Permission of department.

Evolution of major strategic management concepts and theories through in-depth discussions of the literatures which built the field's foundations. The benefits and limitations of key authors' contributions will be reviewed from the prospects of research, teaching, and management practice. Offered on a regular basis.

MGMT 9500. Strategic Management Research. 3 hours.

Prerequisite: Permission of department.

Research in the fields of strategic management, ethics/social responsibility, and entrepreneurship/small business. Includes a discussion of current "cutting edge" literature survey methods, model building and hypothesis generation, research designs, sample and site selection, data gathering methods, and quantitative and qualitative data analysis techniques. Offered on a regular basis.

MGMT 9700. Management Information Systems Research Seminar I. 3 hours. Repeatable for maximum 9 hours credit.

The management information systems (MIS) research literature. It explores applicable research theories and frameworks, research concepts, and exemplary MIS research. Offered on a regular basis.

MGMT 9710. Management Information Systems Research Seminar II. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MGMT 9700.

A continuation of the survey of management information systems (MIS) research literature focusing on MIS dissertation proposals and completed dissertations. Preparation, development, presentation, and defense of an MIS doctoral dissertation proposal. Offered on a regular basis.

MGMT 9810. Seminar in Human Resource Management. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Environments and functions of human resource management. The impact of the economic and institutional environments of human resource management, human resource planning, and human resource functions, such as recruitment, selection, development, compensation, and performance measurement. The course may also include emerging topics in human resource management. Offered on a regular basis.

MGMT 9820. Seminar in Organizational Behavior. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Classic and current theory and empirical research in organizational behavior. Individual differences, perception, job design, groups, leadership, power, motivation, organizational socialization, job satisfaction, organizational commitment, turnover, absenteeism, withdrawal behaviors, and individual performance. The course may also include emerging topics in organizational behavior. Offered on a regular basis.

Marketing

George M. Zinkhan, *Head*

Srinivas K. Reddy, *Graduate Coordinator (PhD)*, 542-3759

Thomas W. Leigh, *Graduate Coordinator (MMR)*, 542-3763
(Brooks Hall)

MARK 7000. Master's Research. 1-10 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

MARK 7630. Creative Problem Solving. 1.5 hours.

Prerequisite: Permission of department.

Understanding the creative process, stimulating creative thinking in problem solving situations,

and applying problem solving techniques to marketing. Introduces tools and techniques for developing skills in idea generation and creative problem solving. Offered on a regular basis.

MARK 7690. Strategic Logistics and Supply Chain Management. 3 hours.

Prerequisite: Permission of department.

Focuses on logistical competency and competitive advantage. Best practices at world class firms (the strategic, structural, and informational). A channel-wide or supply chain perspective will be adopted with emphasis on managing the relationships among businesses involved in the process of buying and selling products and services. Offered on a regular basis.

MARK 7720. Advertising Management. 3 hours.

Prerequisite: Permission of department.

Provides management perspective on planning, developing, and evaluating advertising programs. Focus moves from agency-client relationships and the opportunities for advertising for a product or service to analyzing elements of advertising: market, messages, production and measurement. Offered on a regular basis.

MARK 8100. Introductory Statistical Methods for Marketing Research. 3 hours.

Prerequisite: Permission of department.

Application of probability and basic statistical methods to marketing research problems. Offered on a regular basis.

MARK 8130. Buyer Behavior. 1.5 hours.

Prerequisite: Permission of department.

Buyer decision processes relating to the purchase and consumption of goods and services by both businesses and consumers. Offered on a regular basis.

MARK 8150. Overview of Marketing Research Management. 1.5 hours.

Prerequisite: Permission of department.

The function of marketing research in organizations. Examination of the marketing research process. Offered on a regular basis.

MARK 8200. Research Design and Data Collection. 3 hours.

Prerequisite: Permission of department.

Data collection procedures in marketing research are considered, particularly questionnaire design for personal interviews and sampling issues. Offered on a regular basis.

MARK 8220. Applications of Marketing Research Techniques I. 3 hours.

Prerequisite: Permission of department.

The application of marketing techniques. Focuses on the process of developing a product from idea generation and screening through product testing and copy/positioning evaluation. Offered on a regular basis.

MARK 8240. Applied Models in Marketing Research. 3 hours.

Prerequisite: MARK 8100 or permission of department.

Analysis of marketing data. The use of models, regression analysis, and experimental design in marketing research. Emphasizes analysis of field experiments in marketing. Offered on a regular basis.

MARK 8250. Marketing Research Project I. 1.5 hours. Fifteen 1.5-hour lab periods.

Prerequisite: Permission of department.

Students design and complete research projects or management audits in the area of marketing management under the supervision of a faculty member. Special assignments in simulations and business games may also be undertaken. Non-Traditional Format: This course will meet the second half of fall semester. Offered on a regular basis.

MARK 8300. Information Technology and Marketing. 3 hours.

Prerequisite: Permission of department.

The use of secondary and syndicated data for effective marketing decision making. Use of computerized data bases and marketing decision support systems. Exploring emerging technologies and their influence on marketing. Offered on a regular basis.

MARK 8320. Applications of Marketing Research Techniques II. 1.5-3 hours.

Prerequisite: MARK 8220 or permission of department.

A continuation of Applications of Marketing Research Techniques I. Focuses on evaluating the market potential of new product systems; e.g., product plus price, package, and positioning. Pre-test market evaluation systems, test marketing, tracking studies, research for claim support, and the impact of UPC and scanner technology. Offered on a regular basis.

MARK 8350. Marketing Research Project II. 1.5 hours. Fifteen 1.5-hour lab periods.

Prerequisite: MARK 8250.

A continuation of Marketing Research Project I. Students design and complete research projects or management audits in the area of marketing management under the supervision of a faculty member. Special assignments in simulations and business games may also be undertaken. Non-Traditional Format: This course will meet the first half of spring semester. Offered on a regular basis.

MARK 8400. Master's Internship. 1-5 hours.

Prerequisite: Permission of department.

A professional internship during which students gain a practical, working knowledge of the field and refine knowledge, skills, and attitudes developed in the classroom. Students work directly with cooperating manufacturers, agencies, and

research firms and are assigned responsibility for various products and or research projects. Non-Traditional Format: This course is designated for master's internship and does not meet formally. Offered on a regular basis.

MARK 8440. Organization to Organization Marketing. 3 hours.

Prerequisite: MARK 8510.

The fundamental differences between transactional and partnership purchasing, and marketing strategy implications for business, governmental, and retail intermediary markets. How technology, changing demand patterns, marketing complexity, and global competition impact business marketing and the management of buyer-seller relationships and interactions within the supply chain. Offered on a regular basis.

MARK 8450. Behavioral Theory and Marketing. 3 hours.

Prerequisite: MARK 8510 or permission of department.

Decision making processes and consumer choice, individual and group level influences on consumer behavior, and the implications of consumer behavior for marketers. Concepts and theories developed in a variety of behavioral disciplines are applied to understanding individuals and organizations as consumers. Relationship building, customer satisfaction, and customer loyalty are stressed as new marketing strategies. Offered on a regular basis.

MARK 8460. Market Intelligence and Marketing Research for Managers. 3 hours.

Prerequisite: MARK 8510.

The market information needs of the customer-oriented firm including market trends, market segmentation, competitive intelligence, benchmarking, survey research, database analysis and qualitative methods. Primary and secondary data collection and analysis; brand name advertising and pricing research; sales analysis and forecasting; and customer satisfaction and usage patterns. Offered on a regular basis.

MARK 8500. Business Ethics. 1.5 hours.

An investigation of processes to resolve moral conflicts in business. Normative guidelines to be applied toward attaining common ground among those operating from different levels of moral reasoning. Offered on a regular basis.

MARK 8510. Marketing Management. 3 hours.

The process by which customer demand structures marketing response. The positioning of product/service offerings toward building customer satisfaction is examined by its component parts, so that marketing effort can be seen as the vehicle which delivers desired return on investment. Offered on a regular basis.

MARK 8520. Marketing Management. 1.5 hours.

The process by which customer demand structures marketing response. The positioning of product/service offerings toward building customer satisfaction is examined by its component parts, so that marketing effort can be seen as the vehicle which delivers desired return on investment. Offered on a regular basis.

MARK 8610. Qualitative Research in Marketing. 1.5 hours.

Prerequisite: Permission of department.

Qualitative approaches to conducting marketing research. Paradigmatic assumptions; research design issues; various types of qualitative inquiry, with the primary focus on interviewing and observational methods; issues related to collecting and analyzing data; reporting the findings; and working with clients. Offered on a regular basis.

MARK 8620. Management of Marketing Communications. 3 hours.

Prerequisite: Permission of department.

Integrated marketing communications strategy to support the brand's marketplace positioning. The development of the integrated marketing communications program, including advertising, sales promotion, publicity, and presence plans. Other topics include communication models, message strategy, brand equity, measurement of effectiveness, and approaches to determining brand-customer relationships. Offered on a regular basis.

MARK 8660. Consumer Goods and Services Marketing and New Product Innovation. 3 hours.

Prerequisite: MARK 8510.

Strategic marketing management issues for consumer brands and services, including developing and managing brand equity in consumer markets; managing marketing innovation and products and services development, including identification and evaluation of new markets to enter, designing and testing of product ideas, and developing a marketing plan for launching the new products or services. Offered on a regular basis.

MARK 8990. Directed Study in Marketing Policy. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Students design and complete research projects or management audits in the area of marketing management under the supervision of a faculty member. Special assignments in simulations and business games. Non-Traditional Format: This course is designed for directed study and does not meet formally. Offered on a regular basis.

MARK 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

MARK 9180. Marketing and the Internet. 1.5 hours.

Prerequisite: MARK 8510 or permission of department.

Deals with marketing issues relevant in the emerging medium—the Internet and the World Wide Web. The infrastructure necessary to support electronic commerce, along with the role of advertising, promotion, pricing, and distribution in this new technology. Offered on a regular basis.

MARK 9210. Sales Force Strategy and Account Management. 3 hours.

Prerequisite: MARK 8510.

Developing and managing the marketing-driven sales force, including customer relationship strategy, cross-functional coordination, sales force organization design, customer-focused teams, and human resource decisions, including compensation; salesperson development, and sales leadership. Account development and management, professional selling, and sales technology. Offered on a regular basis.

MARK 9230. Global Marketing Strategy. 3 hours.

Prerequisite: MARK 8510.

Strategies by which global firms build the mix of international business activities to include non-traditional entry modes and how such firms create and maintain synergistic partnerships across national boundaries. The impact of cross functional integration on the conduct of global marketing activities and approaches for developing strategic intelligence that will anticipate new competitors from new national players. Offered on a regular basis.

MARK 9300. Doctoral Dissertation. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

MARK 9400. Marketing Theory. 3 hours.

Prerequisite: Permission of department.

Essential elements of philosophy of science and their use in marketing. Emphasizes the structure of theoretical explanation and the interaction between marketing theory and practice. Offered on a regular basis.

MARK 9450. Seminar in Marketing Management. 3 hours.

Prerequisite: Permission of department.

Current research in the marketing management area, including such content topics as consumer and industrial product development and management, advertising and sales promotion management, pricing, distribution and retail issues, sales management and personal selling as well as the philosophies and methods relevant to applied managerial research. Offered on a regular basis.

MARK 9550. Seminar in Buyer Behavior. 3 hours.

Prerequisite: Permission of department.

Theories, concepts, and research in marketing. Psychology, demography, sociology, anthropology, and other behavioral disciplines and their application to understanding individuals as consumers. Consumer decision making, its determinants, and implications for marketers. Offered on a regular basis.

MARK 9600. Measurement Issues in Marketing. 3 hours.

Prerequisite: Permission of department.

Seminar in proper design and execution of a research project in marketing. Both descriptive and experimental research designs are discussed in terms of reducing measurement error caused by improper conceptual definitions, sampling procedures, data collection methods, and scale construction. Offered on a regular basis.

MARK 9650. Applied Multivariate Methods. 3 hours.

Prerequisite: Permission of department.

Application of multivariate statistical methods to solve marketing problems. Introduction to multivariate statistical computer programs. Offered on a regular basis.

MARK 9700. Marketing Models. 3 hours.

Prerequisite: Permission of department.

Quantitative models used to investigate consumer behavior and attitudes, marketing strategies, and market structures. Offered on a regular basis.

MARK 9750. Advances in Causal Modeling. 3 hours.

Prerequisite: Permission of department.

Statistical techniques collectively known as structural equation modeling or causal modeling in experimental and survey research in marketing. Offered on a regular basis.

MARK 9800. Advanced Research Topics in Marketing. 3 hours.

Prerequisite: Permission of department.

Seminar dealing with the latest research topics in product, advertising, pricing, promotion, distribution, sales, and service research. Emphasis on recent development in theory and methodology. Offered on a regular basis.

MARK 9900. Practicum in Marketing. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Completion of a supervised task in marketing in an approved research setting. Non-Traditional Format: Directed study. Offered on a regular basis.

The College of Education

Russell H. Yeany, *Dean*
(Aderhold Hall)

The College of Education offers graduate degree programs at three levels in a variety of fields. These include: Master of Arts in Education; Master of Education; Master of Art Education; Master of Music Education; Specialist in Education; Doctor of Education; and Doctor of Philosophy. Many of these graduate programs are designed to meet Georgia Department of Education certification requirements.

Although there are common elements in each of the degree programs, there is considerable flexibility to meet individual students' interests and backgrounds. Accordingly, details about specific admission or program requirements and options should be discussed with the appropriate department or division graduate coordinator. General information regarding degree programs available in the College of Education may be obtained from the Office of Graduate Admissions in the Graduate School or from the Office of the Associate Dean in the College of Education.

The Board of Regents has also authorized Master of Education and Doctor of Education programs to be offered cooperatively by the University of Georgia and certain other institutions in Georgia. General information about these degree programs may be obtained from the Graduate School; specific information may be obtained from the Departments of Adult Education and Educational Leadership.

It is possible to earn credit toward the Master of Education or Specialist in Education degree in course work taken through Area Teacher Education Services. Up to a maximum of one-half of the master's program (e.g., 18 semester hours for MEd, Plan B) may be applied toward degree requirements provided that the student has been or is later admitted to resident graduate study. Up to 15 semester hours may be applied toward EdS requirements provided that the student has first been admitted to resident graduate study as a degree candidate.

Six thousand- and 7000-level courses are generally designed for students enrolled in a master's degree program. Eight thousand- and 9000-level courses are generally designed for students pursuing specialist or doctoral degrees. However, due to differences in background, many students may have a mixture of 6000-, 7000-, 8000-, and 9000-level courses regardless of degree objective.

Adult Education

Bradley C. Courtenay, *Head*
Ronald M. Cervero, *Graduate Coordinator*,
542-2214
(River's Crossing)

The goal of the department's instructional mission is to develop students' knowledge and abilities in the social context of adult education, program development and management processes, and teaching and learning processes. The department offers programs of study leading to MEd, EdS, EdD, and PhD degrees.

The MEd in Adult Education is the basic

degree for adult education majors whose vocational objectives require preparation for teaching and/or administration in such areas as adult literacy, continuing education, health education, community development, gerontology, and religious education. The MEd in Human Resource and Organizational Development provides students with the opportunity to gain knowledge and skills focusing on learning within the work environment, career development, organizational development, globalization, and technology. The EdS program is designed to provide advanced study in adult education for individuals who seek to enhance their abilities for application in positions and organizations related to the education of adults. The EdD program is designed to prepare students for careers as leaders in

positions and organizations related to the education of adults. The PhD program is designed to prepare students for careers in research-oriented positions related to the education of adults.

EADU 6000. Special Problems in Adult Education. 3 hours. Repeatable for maximum 9 hours credit.

Specialized training appropriate to the needs of the individual. The student's project may involve intensive library investigation or the collection and analysis of original data pertinent to a given problem. Non-Traditional Format: Individual/special projects. Offered fall, spring, and summer semesters.

EADU 6010. Introduction to Adult Education. 3 hours.

The field of adult education incorporating topics such as the profession, history and philosophy of the adult education movement, delivery systems, programs and organization, and trends and issues. Offered every year on a regular basis.

EADU(READ) 6040. Teaching Reading to Low-Literate Adults. 3 hours.

Causal factors contributing to adult literacy and under-education and instructional approaches appropriate for teaching adults to read. Offered on a regular basis.

EADU 6070. Survey of Educational Gerontology. 3 hours.

Social gerontology with an emphasis on adult education. Background knowledge on aging dealing specifically with program development and the involvement of older adults in educational programs is provided. Offered on a regular basis.

EADU 7020. Adult Learning and Instruction. 3 hours.

Principles and practices of adult learning and instruction. Emphasis on situations, factors, and methods which may influence how adults learn in a variety of traditional and ever changing multimedia and telecommunications settings. Offered every year on a regular basis.

EADU 7030. Program Development in Adult Education. 3 hours.

Guided study and practice in developing educational programs for adults in colleges, public schools, and other institutions. Includes identifying needs, establishing objectives, and critically designing and evaluating programs in adult education. Offered every year on a regular basis.

EADU 7650. Applied Project in Adult Education. 3 hours. Repeatable for maximum 6 hours credit.

Integration of adult education theory and practice in applied project significantly related to the student's professional goals. Focus is on critical re-

flection in practice. Non-Traditional Format: Individual/special projects. Offered every year on a regular basis.

EADU 8010. History and Philosophy of Adult Education. 3 hours.

The development of adult education as a field of study, research, and practice based on historical and philosophical perspectives. Significant social, economic, political, and demographic issues affecting the development of adult education. Offered every year on a regular basis.

EADU 8020. Group Learning in Adult Education. 3 hours.

Nature and function of group learning in diverse adult education contexts. Offered on a regular basis.

EADU 8040. Theoretical Perspectives on Adult Literacy. 3 hours.

Theoretical perspectives of adult literacy and under-education. Sociological, linguistic, historical, and psychological perspectives. Implications for adult literacy education. Offered on a regular basis.

EADU 8050. Multicultural Issues in Adult Education. 3 hours.

Cultural (racial, ethnic, linguistic) diversity in the adult educational context. Topics include cultural self-awareness, demographic changes and projections, problems/issues in inter-cultural educational settings, theoretical perspectives of multicultural adult education, practical problems and related strategies in handling diversity in adult education settings. Offered on a regular basis.

EADU 8090. Adult Development and Instruction. 3 hours.

Adult developmental psychology, including the nature of adult development; issues and trends in the field; theories of adult growth and development; changes in young, middle, and older adulthood; and implications for instruction and learning of adults. Offered on a regular basis.

EADU 8100. Adult Education and Public Policy. 3 hours.

The role and practice of adult education in the formation and implementation of public policy. Major topics include the history of public policy and adult education; major movements and trends; the public policy process today. Offered on a regular basis.

EADU 8110. Adult Education for Community Development. 3 hours.

Critique of community action and learning processes in community settings. An introduction to how adult educators and human resource developers develop communities. Offered on a regular basis.

EADU 8120. Critical Perspectives on Adult Education. 3 hours.

Critical perspectives on adult education theory, research, and practice. Perspectives include critical theory, feminist theory, and issues of race, class, gender, and culture as they relate to the production of knowledge for adult education and the practice of adult education. Offered on a regular basis.

EADU 8140. Impact of Gender and Race on Learning in the Workplace. 3 hours.

The effects of gender and race in the workplace, focusing on the field of adult education and related areas. The impact of sociological, economic, racial, and gender theories are analyzed. Offered on a regular basis.

EADU 8190. Human Resource Development. 3 hours.

Explores three areas of practice and theory of HRD: training, career development, and organizational development. HRD practice at the individual, group, and organizational levels. Offered every year on a regular basis.

(EADU)EDIT 8200. Theory and Practice of Educational Change. 3 hours.

Individual and collective meanings of change, theory, and practice of organizational change and development in a variety of educational settings. Offered every year on a regular basis.

EADU 8620. Adult Education Administration. 3 hours.

Administration in adult education organizations with emphasis on theoretical constructs underlying good management practice. The contributions or research for such management roles as program development, leadership, organizational change, and evaluation are highlighted. Offered on a regular basis.

EADU 8640. Continuing Education for Professionals. 3 hours.

Theoretical and research literature related to the continuing education for professionals. Topics include professionalization, professional practice, professionals as learners, developing and evaluating educational programs, and the institutional context of continuing professional education. Offered on a regular basis.

EADU 9000. Doctoral Research. 1-18 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.
Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

EADU 9010. Adult Education in Social Context. 3 hours.

The social context of adult education, including race, class, and gender analyses, and the role of adult education in society. Relevant historical, sociological, political, and economic factors that influence adult education theory and practice. Offered every year on a regular basis.

EADU 9020. Adult Learning Theory and Research. 3 hours.

Research and theory in adult learning, including social and psychological aspects of adult learning, participation and motivation, self-directed learning, transformative learning, and recent theoretical perspectives. Offered every year on a regular basis.

EADU 9030. Program Planning Theory and Research in Adult Education. 3 hours.

Theoretical and research literature related to planning educational programs for adults. Special emphasis is placed on the political, ethical, and technical issues faced by adult educators. Offered every year on a regular basis.

EADU 9050. Human Resource and Organizational Development. 3 hours.

The literature in human resource and organizational development. Offered on a regular basis.

EADU 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.
Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered every year on a regular basis.

EADU 9600. Research Seminar in Adult Education. 3 hours. Repeatable for maximum 6 hours credit.

Advanced research methods in adult education. Offered every year on a regular basis.

EADU 9610. Trends and Issues in Adult Education. 3 hours.

Selected topics and issues in practice, research, and theory of adult education. Offered on a regular basis.

EADU 9630. Critique of Educational Literature in Adult Education. 3 hours.

Research studies, dissertations, and journal articles in adult education. Offered every year on a regular basis.

EADU 9640. Research Methods in Adult Education. 3 hours. Repeatable for maximum 6 hours credit.

Research methods for dissertation in adult education, including preparation of the dissertation prospectus. Offered every year on a regular basis.

EADU 9700. Internship in Adult Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Supervised internship experience in an adult education setting. Non-Traditional Format: Individual/special projects. Offered every year on a regular basis.

EADU 9750. Reflective Practice Seminar. 3 hours.

Past or current work experiences in adult education used as a basis for systematic reflection on practice. Offered every year on a regular basis.

EADU 9800. Practicum in Adult Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Graduate study projects in special topics not available in scheduled courses. Projects include research and field experiences. Non-Traditional Format: Individual/special projects. Offered every year on a regular basis.

Art Education

Joe Sanders, *Graduate Coordinator, 542-1624*
(Visual Arts Building)

ARED 4010/6010. Techniques of Art Appreciation and Criticism. 3 hours.

Analyzing, interpreting, and evaluating art; the construction of art appreciation curricula; critical methodology as employed in classroom teaching strategies. Offered fall and spring semesters.

ARED 4340/6340. Art for the Exceptional Child. 3 hours.

Nature, identification, and treatment of children's disabilities through art. Emphasizes the role of art for emotional, social, educational, and vocational adjustment of gifted or disabled students. Offered fall and spring semesters.

ARED 5130/7130. Studio Techniques for Art Education. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Use of tools, materials, and processes in adapting the studio arts to children at various age levels and in integrating studio with a total program. Offered fall and spring semesters.

ARED 5230/7230. Special Problems in Art Education I. 3 hours.

Prerequisite: Permission of department.

Specific problem areas, according to individual needs, are investigated, discussed, and evaluated. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 5240/7240. Special Problems in Art Education II. 3 hours.

Prerequisite: Permission of department.

Specific problem areas with adult populations, e.g., prisoners and the aged, are investigated, discussed, and evaluated. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 5250/7250. Special Problems in Art Education III. 3 hours.

Prerequisite: Permission of department.

Specific problem areas in mental health facilities are investigated, discussed, and evaluated. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 5260/7260. Special Problems in Art Education IV. 3 hours.

Prerequisite: Permission of department.

Specific problem areas with handicapped children are investigated, discussed, and evaluated. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 5270/7270. Special Problems in Art Education V. 3 hours.

Prerequisite: Permission of department.

Specific problem areas in community recreation and cultural centers and museums are investigated, discussed, and evaluated. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 5310/7310. Multicultural and Cross-Cultural Study in Art Education. 3 hours.

Prerequisite: Permission of department.

Various cultural traditions in the United States with emphasis on multicultural and cross-cultural art education curricula. Offered fall and spring semesters.

ARED 5350/7350. Teaching of Art in the Elementary School. 3 hours.

Prerequisite: Permission of department.

Recommended practices in qualitative curriculum planning; laboratory experiments that identify philosophical, motivational, and evaluative problems in elementary school art. Offered fall and spring semesters.

ARED 5360/7360. Teaching of Art in the Secondary School. 3 hours.

Prerequisite: Permission of department.

Recommended practice in qualitative curriculum planning, together with laboratory projects that identify philosophical, motivational, and evaluative problems in secondary school art. Offered fall and spring semesters.

ARED 5460/7460. Student Teaching in Art Education. 12 hours.

Prerequisite: Permission of department.

Corequisite: ARED 5470/7470.

Supervised internship in teaching art. Non-Traditional Format: Visits by college supervisor and seminars by arrangement. Offered fall and spring semesters.

ARED 5470/7470. Issues and Practices in Teaching Art. 3 hours.

Corequisite: ARED 5460/7460.

Varied approaches to art issues; practices relevant to art education. Must be taken during student teaching. Offered fall and spring semesters.

ARED 5500/7500. Art Education and the Art Museum. 3 hours.

Prerequisite: Permission of department.

History and current practices in museum education. Application of curricula design programs in art education. Offered fall and spring semesters.

ARED 7370. Curriculum Development in Art Education. 3 hours.

Prerequisite: Permission of department.

Curriculum improvement, guidelines for curriculum improvement, curriculum decision making, testing and evaluating operational curriculum innovations. Offered fall and spring semesters.

ARED 7390. Supervision of Art. 3 hours.

Prerequisite: Permission of department.

Problems of the supervisor, consultant, or director of the art program in the community schools, including qualitative curriculum planning and strategies for building potential of the art teacher. Offered fall and spring semesters.

ARED 7650. Applied Project in Art Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

A topic or problem in education significantly related to the student's professional task. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 8410. History of Art Education. 3 hours.

Prerequisite: Permission of department.

Art educational theory and practice in the institutional setting of American schools, beginning with the industrial arts and drawing instruction initiated in the Massachusetts schools in the nineteenth century. Offered fall and spring semesters.

ARED 8430. Readings in Art Education. 3 hours.

Contemporary art education including the writings of Plato, Aristotle, Rousseau, Herbart, Pestalozzi, Froebel, Dewey, Bruner, McLuhan, Eisner and others. Offered fall and spring semesters.

ARED 8990. Research Seminar in Art Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research methodology, critiques of art education research and proposed research projects. Offered fall and spring semesters.

ARED 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall and spring semesters.

ARED 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall and spring semesters.

ARED 9600. Educational Research in Art Education. 1-9 hours. Repeatable for maximum 9 hours credit. One 3-hour lab period.

Prerequisite: Permission of department.

Independent research on a topic in art education that pertains to the student's primary interest. Non-Traditional Format: Directed study. Offered fall and spring semesters.

ARED 9630. Critique of Educational Literature in Art Education. 3 hours.

Prerequisite: Permission of department.

Research and theoretical writing in the field of education. Non-Traditional Format: Directed study. Offered fall and spring semesters.

Communication Sciences and Disorders

Anne van Kleeck, *Head*

Robert J. Nozza, *Graduate Coordinator*,

542-4561

(Aderhold Hall)

CMSD 4090/6090. Introduction to Phonetics. 2 hours. One lecture and one 1-hour lab period.

Prerequisite: Permission of department.

Identification, discrimination, and IPA transcription of segmental and supra-segmental elements of American English. Emphasis on branches of phonetics; classification schemes; narrow transcription of variants associated with regional dialects, speech disorders, and non-native pronunciations; dialects as manifestations of cultural diversity. Offered fall semester.

CMSD(LING) 4120/6120. Anatomy and Physiology of Speech, Voice, and Hearing. 3 hours.

Prerequisite: Permission of department.

Anatomical structures and basic physiological functions underlying audition, respiration, phonation, articulation, resonance, and swallowing. Offered fall semester.

CMSD 4130/6130. Language Science. 3 hours.
Prerequisite: Permission of department.
Components and structures of language, including analysis of sentences. Language variation and bilingualism. Offered on a regular basis.

CMSD(LING) 4140/6140. Introduction to Speech and Voice Science. 3 hours.
Prerequisite: CMSD 4090/6090 and CMSD (LING) 4120/6120 and PSYC 1101 and (MATH 1101 or PHYS 1010 or permission of department).
Application of basic physical principles to production and perception of speech and voice. Biomechanics of vocal fold oscillation; acoustics of voice source; resonance; acoustic phonetics; psychoacoustics of speech and voice. Interpretation of objective measures and outputs of computational models. Offered spring semester.

CMSD 4150/6150. Hearing Science. 3 hours.
Prerequisite: CMSD(LING) 4120/6120 or permission of department.
Physics of sound and the physiological and psychological bases of auditory function. Offered fall semester.

CMSD 4160/6160. Intermediate Speech and Voice Science: Clinical Applications. 3 hours.
Prerequisite: (CMSD(LING) 4140/6140 and CMSD 4150/6150 and CMSD 4530 and CMSD 6600) or permission of department.
Application of recent theory and objective measurement techniques to assessment and intervention in speech pathology. Readings include research articles in the "sciences" of speech and voice. Informal laboratory demonstrations and hands-on activities as class size permits. Designed for beginning master's level speech-language pathology majors on a non-thesis track. Offered on a regular basis.

CMSD(LING) 4500/6500. Study of Language Development. 3 hours.
Prerequisite: CMSD 4130/6130 or permission of department.
Normal development of children's reception, integration, and expression of linguistic information; cultural, gender, socioeconomic, cognitive, and prelinguistic influences on language development. Offered on a regular basis.

CMSD 4730/6730. Psychosocial Characteristics of Deafness. 3 hours.
Prerequisite: CMSD 4710 or permission of department.
Development, adjustment, and educational needs of deaf individuals. Cognitive, personality, and socioemotional development; aptitudes, spe-

cial abilities, and cultural perspectives. Offered on a regular basis.

CMSD 4810/6810. Basic Sign Language. 3 hours.
Prerequisite: Permission of department.
History and description of sign language systems. Practice in expressive and receptive use of sign language and finger spelling. Offered on a regular basis.

CMSD 5790/7790. Rehabilitative Audiology. 3 hours.
Prerequisite: CMSD 4710 and permission of department.
Theories and procedures used in the rehabilitation of children and adults with hearing loss. Offered on a regular basis.

CMSD 6000. Special Problems in Communication Sciences and Disorders. 1-6 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of department.
Adaptation of the Communication Sciences and Disorders curriculum to meet students' individual needs: supervised or directed reading, research, or clinical experiences. Non-Traditional Format: Students work independently or under the direction of a faculty member. Meetings between students and supervising faculty are arranged independently. Offered on a regular basis.

CMSD 6540. Language Assessment and Intervention with Preschool Children. 3 hours.
Prerequisite: CMSD 4520 and permission of department.
Formal and informal language assessment procedures; selection and implementation of appropriate assessment instruments and models; intervention models for diverse populations. Offered on a regular basis.

CMSD 6550. Language Assessment and Intervention with School-Age Children. 3 hours.
Prerequisite: CMSD 4520 and permission of department.
Formal and informal language assessment procedures; selection and implementation of appropriate assessment instruments and models; intervention models for diverse populations. Language requirements for successful classroom performance in kindergarten through high school. Offered on a regular basis.

CMSD 6600. Research Design in Communication Sciences and Disorders. 3 hours.
Prerequisite: Permission of department.
Theories, thought processes, and methods underlying science, research, and clinical work in communication sciences and disorders. Emphasis on the tools necessary to be an informed consumer of research publications and a productive contributor to a research-based clinical profession. Offered on a regular basis.

CMSD 6700. Diagnosis in Speech-Language Pathology. 2 hours.

Prerequisite: CMSD 4520 and CMSD 4530 and permission of department.

Theory, purpose, selection, administration, and interpretation of formal and informal diagnostic tests and procedures. Determining the differential diagnosis, nature of the problem, and recommended intervention, for clients of all ages with speech and/or language disorders. Requires supervised lab activities for development of diagnostic skills. Offered on a regular basis.

CMSD 6740. Articulation and Phonology Disorders. 3 hours.

Prerequisite: Permission of department.

Nature and treatment of disorders of the production of speech sounds. Phonological development and phonological processes; using theoretical and etiological knowledge as the basis of clients' individualized assessment and intervention plans. Offered on a regular basis.

CMSD 6750. Voice and Resonance Disorders. 3 hours.

Prerequisite: Permission of department.

Nature and treatment of physiological and other disorders of pitch, loudness, and voice quality, including those associated with cleft palate and laryngectomy. Using theoretical and etiological knowledge as the basis for clients' individualized assessment and intervention plans. Offered on a regular basis.

CMSD 6760. Fluency Disorders. 3 hours.

Prerequisite: Permission of department.

Nature and treatment of stuttering, cluttering, and acquired neurogenic stuttering. Using theoretical and etiological knowledge as the basis for clients' individualized assessment and intervention plans. Offered on a regular basis.

CMSD 6770. Clinical Audiology. 4 hours.

Prerequisite: CMSD 4710 or permission of department.

Rationale and procedures for measuring aspects of hearing using simple and complex stimuli, threshold and supra-threshold measurements, and physiologic principles associated with middle and inner ear analysis. Offered on a regular basis.

CMSD 6780. Auditory Electrophysiology. 3 hours.

Prerequisite: Permission of department.

Fundamental principles essential to the understanding and measurement of electrocochleography and auditory brainstem responses; the clinical application of these procedures to evaluate the peripheral and central auditory system. Offered on a regular basis.

CMSD 6790. Hearing Aids and Other Amplification Systems. 3 hours.

Prerequisite: CMSD 6770 and CMSD 8000 and permission of department.

Design, electroacoustic characteristics, and acoustic characteristics of analog, programmable, and digitally programmable amplification systems, including personal hearing aids and other personal and group systems. Ear mold characteristics and acoustic modifications, fitting strategies, and real-ear measurement. Offered on a regular basis.

CMSD 6800. Neural Bases of Speech, Language, and Hearing. 3 hours.

Prerequisite: Permission of department.

Neuroanatomy and neurophysiology of speech, language, and hearing from a communication science perspective. Offered on a regular basis.

CMSD 6820. Advanced Electrophysiology. 3 hours.

Prerequisite: CMSD 6780 and permission of department.

Neurophysiologic procedures used in the evaluation of human auditory and vestibular systems, including auditory middle and late responses, and electronystagmography. Offered on a regular basis.

CMSD 6840. Neurogenic Speech Disorders and Dysphagia. 3 hours.

Prerequisite: CMSD 6800 and permission of department.

Dysarthria, apraxia, dysphagia, and related disorders affecting the speech musculature. Focus is on neurological correlates of muscle paralysis/paresis, differential diagnosis, and speech/communication rehabilitation. Offered fall semester.

CMSD 6850. Aphasia. 3 hours.

Prerequisite: CMSD 6800 and permission of department.

Study of acquired aphasia and related neurogenic communicative disorders. Focus is on neurological correlates, differential diagnosis, and rehabilitation. Offered on a regular basis.

CMSD 6860. Special Issues in Adult Language Disorders. 3 hours.

Prerequisite: CMSD 6800 and permission of department.

Communication and cognition in normal adults and the influences of aging and acquired neurological impairments on these behaviors. Adult communication disorders associated with dementia, agnosia, non-dominant hemisphere injury, and traumatic brain injury are discussed, with emphasis on their characteristics, assessment, and treatment. Offered on a regular basis.

CMSD 6900. Pediatric Audiology. 3 hours.

Prerequisite: CMSD 8000 and permission of department.

Prerequisite or corequisite: CMSD 6790.

Normal auditory development and etiologies of childhood hearing impairment and deafness. Identification and assessment of hearing loss in infants and children, including screening principles and practices and amplification fitting strategies for the very young. Offered on a regular basis.

CMSD 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

CMSD 7040. Clinical Practicum in Speech-Language Pathology. 1-3 hours. Repeatable for maximum 9 hours credit.

Supervised clinical practice and field experience with clients of all ages. Direct involvement in all aspects of screening, assessment, and treatment of speech and language disorders. Professional issues related to the practice of speech-language pathology presented in weekly Case Review Seminars. Non-Traditional Format: Students work with assigned clients under the direction of a faculty member or other clinical supervisor. Offered on a regular basis.

CMSD 7140. Clinical Practicum in Audiology. 1-3 hours. Repeatable for maximum 9 hours credit.

Supervised clinical practice and field experience with clients of all ages. Direct involvement in all aspects of screening, basic audiological evaluations, special diagnostic tests, and aural rehabilitation. Professional issues related to the practice of audiology presented in weekly Case Review Seminars. Non-Traditional Format: Students work with assigned clients under the direction of a faculty member or other clinical supervisor. Offered on a regular basis.

CMSD 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

CMSD 7700. Clinical Internship in Speech-Language Pathology. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Supervised practicum in a hospital, medical center, rehabilitation center, community clinic, public or private school, educational service agency, or a combination of these and similar settings. Non-Traditional Format: Students work independently or under the direction of a faculty member. Meetings

between students and supervising faculty are arranged independently. Offered on a regular basis.

CMSD 7770. Internship in Audiology. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Supervised practicum in hospitals, medical centers, community clinics, public/private schools, educational service agencies or a combination of these settings. Non-Traditional Format: Students work with assigned clients under the direction of a faculty member or other clinical supervisor. Offered on a regular basis.

CMSD 7780. Pediatric Rehabilitative Audiology. 3 hours.

Prerequisite: CMSD 4710 and permission of department.

Models and procedures for implementing effective auditory rehabilitation for children. Offered on a regular basis.

CMSD 7810. Hearing Conservation. 2 hours.

Prerequisite: Permission of department.

Detection of pathological noise and the correction of its effects on human hearing mechanisms in community, industrial, and military settings. Offered on a regular basis.

CMSD 7820. Language of Deaf and Hard of Hearing. 3 hours.

Prerequisite: CMSD(LING) 4500/6500 and permission of department.

Theories and strategies for assessing and facilitating language development in individuals who are deaf or hard of hearing, including historical and current approaches. Offered on a regular basis.

CMSD 7830. Spoken Language of Deaf and Hard of Hearing. 3 hours.

Prerequisite: Permission of department.

Theories and strategies for assessing and facilitating listening skills and speech skills in individuals who are deaf or hard of hearing. Offered on a regular basis.

CMSD 7840. Instructional Strategies and Curriculum for Deaf. 3 hours.

Prerequisite: CMSD 7820 and permission of department.

Development, selection, and modification of instructional materials for early childhood and elementary students who are deaf or hard of hearing; instructional strategies for these children. Offered on a regular basis.

CMSD 7850. Written Language of Deaf and Hard of Hearing. 3 hours.

Prerequisite: Permission of department.

Prerequisite or corequisite: CMSD 7820.

Theories and strategies for assessing and facilitating reading and writing in individuals who are deaf or hard of hearing. Impact of hearing loss on

written language and language processes. Offered on a regular basis.

CMSD 7860. Educational Assessment of Deaf and Hard of Hearing. 3 hours.

Prerequisite: CMSD 7820 and permission of department.

Interview techniques; selection, administration, and interpretation of appropriate norm-referenced and criterion-referenced measures; report preparation; conference procedures. Offered on a regular basis.

CMSD 8000. Auditory Processes: Physiological and Psychological Bases. 3 hours.

Prerequisite: CMSD 4150/6150 and permission of department.

The modification and transmission of acoustic information as it travels from the peripheral auditory system through the central nervous system; the limits and characteristics of auditory function as measured using psychophysical techniques. Offered on a regular basis.

CMSD 8010. Seminar in Speech and Hearing. 2 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Current literature or research and professional issues at the intersection of speech and hearing sciences and disorders. Offered on a regular basis.

CMSD 8030. Advanced Topics in Audiology. 3 hours.

Prerequisite: Permission of department.

Specialized measurement techniques in diagnostic audiology, including acoustic immittance and otoacoustic emissions measures; advanced hearing aid and amplification selection and fitting strategies. Offered on a regular basis.

CMSD(LING) 8050. Seminar: Language Acquisition and Disorders. 3 hours.

Prerequisite: Permission of department.

Recent issues and research in language acquisition and disorders. Major theories of development, assessment, and intervention, with emphasis on integration of theory and clinical practice. Offered on a regular basis.

CMSD 8060. Seminar in Auditory Disorders. 3 hours.

Prerequisite: Permission of department.

Congenital and acquired hearing disorders and their effects on the peripheral and central auditory systems. Offered on a regular basis.

CMSD(LING) 8360. Advanced Speech and Voice Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: [(CMSD(LING) 4140/6140 or CMSD 4150/6150)] and CSCI 1100-1100L and permission of department.

Designed for students at the early stages of thesis or dissertation planning. Specific topics vary

depending on student/faculty interests. Lecture/discussion format to present research approaches to acoustic phonetics, voice science, and psychoacoustics. Emphasis on available instrumentation, measurement standards, psychophysics, and issues in signal processing of speech and voice. Offered summer semester.

CMSD(LING) 8360L. Laboratory in Advanced Speech and Voice Science. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: CMSD(LING) 8360 and permission of department.

Hands-on laboratory exercises emphasizing digital recording techniques and signal conditioning; spectral, spectrographic, and aerodynamic measures of speech and voice; indirect measures of laryngeal vibration; computational models of peripheral auditory processing. Offered summer semester.

CMSD 8990. Research Seminar in Communication Sciences and Disorders. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Review of research literature and current issues for advanced graduate students. Non-Traditional Format: Students work independently or under the direction of a faculty member. Meetings between students and supervising faculty are arranged independently. Offered on a regular basis.

CMSD 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

CMSD 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 27 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

Counseling and Human Development Services

Richard L. Hayes, *Head*
John C. Dagley, *Graduate Coordinator*,
542-1812
(Aderhold Hall)

Two distinct doctoral programs are offered in the department: the counseling psychology program, and the counseling and student personnel services program. Each program has separate admission standards, curricula, and general requirements.

The counseling psychology program is based on the scientist-practitioner model of training in professional psychology and was fully accredited by the American Psychology Association in 1986. The program, leading to the PhD degree in counseling psychology, prepares graduates for instructional and service positions in colleges and universities and for employment in health agencies and institutions. The curriculum is also intended to be consistent with state licensure requirements for the practice of applied psychology in independent practice.

The counseling and student personnel services PhD program is designed to prepare professionals for careers as college student affairs administrators, graduate faculty members in student affairs professional preparation programs, and/or positions that specialize in student assessment, outcomes research, and program evaluation in higher education. The scientist-practitioner model of graduate education is the foundation of the program. Graduates are expected to possess skills and knowledge as theoretician-researchers and as professional higher education leader-administrators.

There are three master's degree programs in the department, each of which offers the MEd degrees: (1) college student affairs administration, (2) rehabilitation counseling, and (3) guidance and counsel-

ing, which has two specialities school counseling and community agency counseling. The college student affairs administration, school counseling, and community counseling programs are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP), and the rehabilitation counseling program is accredited by the Council on Rehabilitation Education (CORE).

The college student affairs administration program focuses on the psychosocial and intellectual development of college students and is designed to prepare practitioners for work in student affairs divisions in areas such as residence halls, student activities, and career planning and placement. The rehabilitation counseling program is designed to educate counselors prepared to assist persons with disabilities in a variety of public and private service and treatment agencies. The guidance and counseling program is designed to prepare graduates to work as school counselors or to work in a variety of community settings, such as mental health centers, alcohol and drug treatment programs, and employment services offices.

The Specialist in Education (EdS) program is offered in guidance and counseling (with specialty in school counseling). The EdS provides advanced education and training in human service delivery and leadership, and is viewed as a terminal degree designed for individuals who do not plan to pursue the doctorate.

Admission to the PhD program is for fall semester only. Admission to all master's degree programs is for summer or fall semester only, depending on the program. Applicants should contact the department's graduate coordinator for detailed information about programs and application procedures. Early application is encouraged because all programs have enrollment limits.

ECHD 4020/6020. Interpersonal Relationships. 3 hours.

Prerequisite: Permission of department.

Interpersonal skills are taught and demonstrated by the instructor. Students practice the skills in role-playing situations. Skills included are physical attending, psychological attending, listening, perceiving surface and underlying feelings, basic responding skills, personalizing skills, and initiating skills. Offered fall and spring semesters.

ECHD 6000. Special Problems in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 6 hours credit.

Specialized training appropriate to the needs of the individual. The student's project may involve intensive library investigation or the collection and analysis of original data pertinent to a given problem. Offered fall, spring, and summer semesters.

ECHD 6030. Interpersonal Facilitation and Intervention I. 4 hours.

Basic counseling skills for student affairs practice. Course focuses on counseling techniques and theories appropriate for use with college students as they deal with developmental issues and concerns. Offered fall semester.

ECHD 6040. Interpersonal Facilitation and Intervention II. 3 hours. One 3-hour lab period. Prerequisite: ECHD 6030.

Focuses on strategies and tools that may be used to assist college students, including psychological assessment techniques, career development theory and interventions, and use of facilitation skills in working with staff. Offered spring semester.

ECHD 7000. Master's Research. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ECHD 7010. Individual Appraisal. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: ECHD 7040 and permission of department.

Principles of testing, types of scores, use of instruments and methods of assessing abilities, achievement levels, interests, attitudes, developmental variables, vocational skills, and personality characteristics. Use of test and non-test data in counseling and human development services. Offered spring semester.

ECHD 7040. Theories of Counseling and Human Development. 3 hours.

Prerequisite: ECHD 6020 and permission of department.

Selected theories of human development and their application to research, theory, and practice in counseling. Various approaches to counseling, with an emphasis on their use in educational, rehabilitation, community, and employment settings. Offered fall semester.

ECHD 7050. Lifestyle and Career Development. 3 hours.

Prerequisite: ECHD 7040 and permission of department.

Career development conceptual formulations; career information in teaching and counseling; sequential decision-making processes and strategies; job placement skills; nature, sources, and functions of information available to assist individuals in formulating goals and comprehensive plans. Offered spring semester.

ECHD 7060. Cross-Cultural Counseling. 3 hours.

Prerequisite: ECHD 6020 or ECHD 6030.

Knowledge, skills, and self-awareness needed to counsel members of racially and ethnically diverse populations. Offered fall and summer semesters.

ECHD 7080. Introduction to Group Counseling. 3 hours.

Prerequisite: ECHD 6020 and permission of department.

Prerequisite or corequisite: ECHD 7040.

Introductory group counseling theories. Review of the basics of setting up and conducting counseling groups. Discussion of ethical standards related to group counseling. Offered fall semester.

ECHD 7090. Structured Group Interventions. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: ECHD 6020 or ECHD 6030.

Basic approaches to structured group work in relation to goals, objectives, and dynamics and the implications of group approaches to personal and educational development of students and adults. Offered fall semester.

ECHD 7090L. Structured Group Laboratory. 1-3 hours. Repeatable for maximum 6 hours credit.

One lab period of 1-3 hours per week.

Prerequisite: ECHD 7090.

Design, implementation, and evaluation of structured group interventions. Group leadership skills will be developed and a structured group devised by the student will be implemented under supervision. Offered spring semester.

ECHD 7150. Loss and Grief Counseling. 3 hours.

Prerequisite: ECHD 7040.

Conceptualization of loss as a set of generic experiences resulting from a variety of changes across the lifespan. Issues related to the meaning of loss for the individual, factors that influence the grieving process, and the identification and treatment of complicated mourning. Not offered on a regular basis.

ECHD 7200. Foundations of Rehabilitation Counseling. 3 hours.

Prerequisite: Permission of department.

Prerequisite or corequisite: ECHD 6020.

The rehabilitation field with emphasis on philosophical, historical, psychological, and organizational foundations, rehabilitation services, and professional practice. Offered fall semester.

ECHD 7210. Vocational Assessment. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: ECHD 7200 and permission of department.

Assessment methods for identifying individual skills, interests, and support needs to assist individuals with disabilities to develop career and life goals. Offered fall semester.

ECHD 7230. Coordinating Career and Life Planning Services. 3 hours.

Prerequisite: ECHD 7200 and permission of department.

Coordination of transition and community services and the resources that support accomplishment of individualized rehabilitation goals. Strategies and methods for assisting individuals with disabilities in choosing career and life planning services. Offered fall semester.

ECHD 7240. Psycho-Social Issues in Rehabilitation. 2 hours.

Prerequisite: ECHD 7200 or permission of department.

Psychological and sociological aspects of severe disabilities, including adjustment factors in living with disabilities, community attitudes toward individuals with disabilities, and strategies to change negative attitudes. Offered fall semester.

ECHD 7250. Medical Information and Assistive Technology. 3 hours.

Prerequisite: ECHD 7200 or permission of department.

Etiology, prognosis, treatment, and vocational implications of varying disabling conditions. Assisting persons with severe disabilities to select technology and other forms of support. Offered spring semester.

ECHD 7260. Employment Strategies. 3 hours.

Prerequisite: ECHD 7200 or permission of department.

Theory and practice in career development for individuals with disabilities. Employment strategies including innovative job development, job modification, and job creation strategies. Assisting individuals with disabilities to select, obtain, maintain, and advance in employment. Offered spring semester.

ECHD 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ECHD 7400. Foundations of College Student Affairs Administration. 3 hours.

The field of college student affairs with emphasis on historical, philosophical, psychological, and

sociological foundations, and student service functions. Offered fall semester.

ECHD 7410. College Student Affairs Interventions. 3 hours.

Prerequisite: ECHD 7400 or permission of department.

Application of student development and organization development theories to the institutional environments of college students for purposes enhancing their personal and educational development. Offered spring semester.

ECHD 7420. Theories of College Student Development. 2 hours.

Prerequisite: Permission of department.

Human development and person-environment theories, assessment methods, and their applications to college students. Offered spring semester.

ECHD 7430. College Student Ecology. 3 hours.

Prerequisite: ECHD 7400 or permission of department.

The modern American college and university and their students, with special emphasis on the diverse student populations. College student ecology, including exploration of trends in higher education, the impact of college on students, and current campus cultures. Offered spring semester.

ECHD 7440. Administration in College Student Affairs. 3 hours.

Prerequisite: ECHD 7400 or permission of department.

Leadership and administration principles and practices applied to college student affairs programs and services. Administrative approaches designed to support, enhance, and create developmental educational environments for college students. Offered fall semester.

ECHD 7500. Foundations of School Counseling. 3 hours.

Prerequisite: Permission of department.

Prerequisite or corequisite: ECHD 6020.

The profession of counseling and specialty practice as applied in schools. Consideration of the nature of schools as well as school counseling programs that are comprehensive, developmental, and collaborative in nature. Offered summer semester.

ECHD 7600. Foundations of Mental Health and Community Counseling. 3 hours.

Prerequisite: Permission of department.

Prerequisite or corequisite: ECHD 6020.

Counselors in mental health counseling settings (such as community agencies, drug and alcohol treatment programs, and employment services). Historical, philosophical, psychological, and sociological foundations of counseling in community settings. Offered fall semester.

ECHD 7700. Individual Counseling Practicum. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ECHD 6020 and permission of department.

Supervised psychological counseling practice in a setting consistent with the student's professional goals.

Non-Traditional Format: Practicum. Offered spring semester.

ECHD 7720. Advocacy Practicum in Rehabilitation Counseling. 1-2 hours. Repeatable for maximum 4 hours credit.

Prerequisite: ECHD 6020 and permission of department.

The political, social, economic, and environmental barriers faced by people with disabilities. Non-Traditional Format: Practicum. Offered spring semester.

ECHD 7740. Practicum in College Student Affairs. 1-2 hours. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Supervised practice within a student affairs program at an institution of higher learning. Non-Traditional Format: Practicum. Offered spring semester.

ECHD 7820. Internship in Rehabilitation Counseling. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 7720 and permission of department.

A supervised experience in a rehabilitation setting appropriate to rehabilitation specialization. Non-Traditional Format: Supervised counseling practice under professional supervision. Offered fall and spring semesters.

ECHD 7840. Internship in College Student Affairs. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 7740 and permission of department.

Supervised experience in a college setting appropriate to college student affairs. Non-Traditional Format: Supervised practice under professional supervision. Offered fall and spring semesters.

ECHD 7850. Internship in School Counseling. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 7700 and permission of department.

Supervised experience in an educational setting appropriate to school counseling. Non-Traditional Format: Supervised counseling practice under professional supervision. Offered fall and spring semesters.

ECHD 7860. Internship in Community Counseling. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 7700 and permission of department.

Supervised experience in a community setting appropriate to community counseling. Non-Traditional Format: Supervised counseling practice under professional supervision. Offered fall and summer semesters.

ECHD 7920. Research Methods in Counseling and Psychotherapy. 3 hours.

Prerequisite: ECHD 7040.

Behavioral science research methods used to study counseling and psychotherapy. Examination of frequently used qualitative and quantitative research approaches, critique of published research in the field, and development of research plans. Offered summer semester.

ECHD 7940. Research Methods in College Student Affairs. 3 hours.

Prerequisite: ECHD 7400.

Behavioral science research methods used to study college students and higher education institutions. Examination of frequently used qualitative and quantitative research approaches, critique of published research in the field, and development of research plans. Offered spring semester.

ECHD 7990. Research Seminar in Counseling and Human Development Services. 1-6 hours. Repeatable for maximum 6 hours credit.

A seminar for master's level students in counselor education dealing with proposed research projects and critiques of the literature. Non-Traditional Format: Course is directed study in research that may be satisfied by research with multiple instructors and/or independent study under faculty supervision. Offered fall, spring, and summer semesters.

ECHD 8000. Applied Project in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 6 hours credit. One lab period of 1-3 hours per week.

Prerequisite: Permission of department.

Individual research in an area pertinent to the field of counseling and human development services, with emphasis on increasing skills necessary to collect, interpret, and utilize research data. Offered fall, spring, and summer semesters.

ECHD 8020. Seminar in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Specific areas in counseling and human development services. Topics will vary but will focus on the development of advanced knowledge and skills in emerging areas relevant to professionals

in counseling and human development. Offered fall, spring, and summer semesters.

ECHD 8030. Psychodiagnosis. 3 hours.

Prerequisite: ECHD 7040 and permission of department.

Key concepts of mental health and illness with an emphasis on examining major issues in psychiatric diagnosis, including gender, racial/ethnic, and cultural factors. Students will become familiar with the DSM classification system and achieve proficiency in making diagnoses. Offered fall and spring semesters.

ECHD 8100. Developmental Counseling. 3 hours.

Prerequisite: ECHD 7040.

Cognitive, psychosocial, person-environment interaction, and life-span development theories in counseling. Offered summer semester of odd-numbered years.

ECHD 8110. Adlerian Family Counseling. 3 hours.

Prerequisite: ECHD 7040.

Presentations, demonstrations, and critical analyses of the basic principles and practices of Adlerian Family Counseling. A review of the fundamental tenets of Alfred Adler's approach to family education, intervention, and enrichment. Offered summer semester of odd-numbered years.

ECHD 8120. Person-Centered Approach. 3 hours.

Prerequisite: ECHD 7040.

Significant theories in the practice of the Person-Centered Approach. Research and investigation of its applications will be evaluated critically. Offered fall semester of even-numbered years.

ECHD 8130. Expressive Arts and Play Media in Counseling. 3 hours.

Prerequisite: ECHD 7040.

Expressive arts and play media in counseling with children and adolescents. Offered summer semester of odd-numbered years.

ECHD 8140. Existential Approaches to Therapy. 3 hours.

Prerequisite: ECHD 7040.

Theory and practice of existential approaches to individual and group therapy. Offered spring semester of odd-numbered years.

ECHD 8150. Child and Family Counseling. 3 hours.

Prerequisite: ECHD 7040.

Theories and methods of working with children and families. The understanding of children's development and behavior and the understanding of family systems and interventions. Offered fall, spring, and summer semesters.

ECHD 8160. Gestalt Therapy. 3 hours.

Prerequisite: ECHD 7040.

Significant theories in the practice of Gestalt Therapy. Research and investigation of its applications will be evaluated critically. Offered spring semester of even-numbered years.

ECHD 8170. Theories of Drug and Alcohol Abuse. 3 hours.

The causes and effects of drug and alcohol addiction and the implications for counseling. Offered summer semester.

ECHD 8180. Counseling the Drug and Alcohol Abuser. 3 hours.

Prerequisite: ECHD 8170.

Advanced counseling and treatment approaches used with drug and alcohol abusers. Not offered on a regular basis.

ECHD 8990. Research Seminar in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 6 hours credit. One lab period of 1-3 hours per week.

Prerequisite: Permission of department.

Research seminar for individuals or groups of doctoral students dealing with proposed psychological, vocational, educational, and developmental programs and projects. Offered fall, spring, and summer semesters.

ECHD 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ECHD 9020. Human Development Services Interventions. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Investigation of theoretical foundations, research findings, and techniques for selected human development interventions. Environmental assessment and milieu management, life skills training, consultation in human service agencies, and organizational development in educational settings. Not offered on a regular basis.

ECHD 9050. Career Development and Research. 3 hours.

Prerequisite: ECHD 7050 and permission of department.

Career development theory and research, including a comprehensive review of the principles and techniques of career counseling. Special consideration will be given to the seminar research, developmental theorists, typological theorists, and social learning theorists. Offered summer semester of odd-numbered years.

ECHD 9060. Advanced Cross-Cultural Counseling. 3 hours.

Prerequisite: ECHD 7060 and permission of department.

Multicultural issues related to gender, age, disability, and sexual orientation as they pertain to counseling. Offered fall semester.

ECHD 9080. Advanced Theories and Procedures of Group Work. 3 hours.

Prerequisite: ECHD 7080 and permission of department.

Advanced group work theories with emphasis on techniques and application, ethical responsibilities, and current trends. Not offered on a regular basis.

ECHD 9100. Constructivist Approaches in Counseling Theory. 3 hours.

Prerequisite: Permission of department.

The origins, current status, and emerging applications of constructivist developmental approaches to counseling psychology. Offered summer semester of even-numbered years.

ECHD 9110. Cognitive-Behavioral Approaches in Counseling Theory. 3 hours.

Prerequisite: Permission of department.

Current cognitive-behavioral models for understanding human problems and behavior change. The cognitive-behavioral movement as a bridge between theory and practice. Offered spring semester of odd-numbered years.

ECHD 9220. Rehabilitation Education. 3 hours.

Prerequisite: Permission of department.

Rehabilitation education programming, including accreditation requirements, training grants, field work supervision, and continuing education. Not offered on a regular basis.

ECHD 9240. Professional Issues in Rehabilitation. 3 hours.

Prerequisite: Permission of department.

History, development, and current issues related to the profession of rehabilitation counseling. Philosophical assumptions, legal and ethical considerations, new rehabilitation service initiatives, and new consumer populations. Not offered on a regular basis.

ECHD 9300. Doctoral Dissertation. 1-12 hours.

Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

ECHD 9400. Seminar in Student Affairs Administration. 3 hours. Three 1-hour lab periods.

Prerequisite: Permission of department.

Current trends, issues, and research related to contemporary college student affairs practices.

Organizational patterns, models, and structures; professional standards; personnel practices; and innovations in program and service delivery. Offered fall semester.

ECHD 9410. Organizational Development and Consultation in Higher Education. 3 hours.

Prerequisite: ECHD 9400.

Organizational development strategies and consultation approaches designed to strengthen higher education organizations. Offered on a regular basis.

ECHD 9420. Advanced Theories of College Student Development. 3 hours.

Prerequisite: ECHD 7420.

Major theories of college-student psychosocial, intellectual, moral, and ego development; measurement of developmental constructs; and effects of college attendance on each domain. Differences attributable to gender, socioeconomic background, sexual orientation, age, and ethnicity. Offered fall semester of even-numbered years.

ECHD 9430. Environmental Assessment and Milieu Management. 3 hours.

Prerequisite: ECHD 9400 and permission of department.

Theories and techniques for assessing human environments in educational settings and strategies to influence them. Offered on a regular basis.

ECHD 9440. Leadership and Policy Development in Student Affairs. 3 hours.

Prerequisite: ECHD 9400 and permission of department.

The theoretical foundations, research findings, and contemporary practices related to the processes of leadership and policy-making in college student affairs division. Specific attention will be given to analyzing the role of leadership in the institution and the effects of policy implementation. Offered on a regular basis.

ECHD 9450. Staffing Practices in Student Affairs. 3 hours.

Prerequisite: ECHD 9400 and permission of department.

Research and theory in staff recruitment and selection, new position orientation, staff supervision, staff development and continuing education, and performance appraisal. Offered on a regular basis.

ECHD 9460. Issues in Student Affairs Administration. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ECHD 9400 and permission of department.

Theories, models, issues, and practices in contemporary college student affairs administration. Offered on a regular basis.

ECHD 9600. Foundations of Counseling Psychology I. 3 hours.

Prerequisite: Permission of department.

History, development, and current issues related to the profession of counseling psychology. Philosophical and cultural assumptions, legal and ethical considerations, and implications of selected research topics. Offered fall semester.

ECHD 9610. Foundations of Counseling Psychology II. 3 hours.

Prerequisite: ECHD 9600 and permission of department.

Basic theoretical foundations for the profession of counseling psychology. Counseling and psychotherapy, career development, human development, and cultural diversity perspectives. Offered spring semester.

ECHD 9620. Assessment and Diagnosis in Counseling Psychology I. 3 hours.

Prerequisite: ECHD 9610 and permission of department.

The administration and interpretation of psychological measure of intellectual, social, and personality characteristics of individuals. The ethical use of test results in counseling individuals from diverse populations. Offered fall semester.

ECHD 9630. Assessment and Diagnosis in Counseling Psychology II. 3 hours.

Prerequisite: ECHD 9620 and permission of department.

Use of selected appraisal instruments and techniques, with an emphasis on outcome assessment and the relationship between assessment and psychodiagnosis. Students will become familiar with the DSM classification system and achieve proficiency in making diagnoses. Offered spring semester.

ECHD 9640. Systemic Intervention in Counseling Psychology I. 3 hours.

Prerequisite: ECHD 9630 and permission of department.

The role of the psychologist from a systems perspective. Understanding individuals within the various contexts in which they function, such as families, work groups, cultures, and societies. Students will be trained in intervention techniques for working with clients in families and groups. Offered fall semester.

ECHD 9650. Systemic Intervention in Counseling Psychology II. 3 hours.

Prerequisite: ECHD 9640 and permission of department.

Foundations of social psychological research and its relationship to systems theory and organizational development. The role of the counseling psychologist as a consultant. The consultation skills necessary to work with teachers, clients, patients,

administrators, and personnel in agencies, organizations, or institutions. Offered spring semester.

ECHD 9660. Professional Development Seminar in Counseling Psychology I. 3 hours.

Prerequisite: ECHD 9650 and permission of department.

Intended to facilitate students' transition from psychologists-in-training to professional counseling psychologists. The seminar will assist students in the integration and articulation of their own theoretical framework to guide their practice and research as counseling psychologists. Offered fall semester.

ECHD 9670. Professional Development Seminar in Counseling Psychology II. 3 hours.

Prerequisite: ECHD 9660 and permission of department.

Emphasis on current and emerging professional issues, including psychology licensure, professional and legal standards, and ethical practice in counseling psychology, as well as current topics in therapy. Offered spring semester.

ECHD 9680. Process of Counseling Psychology Supervision. 3 hours.

Prerequisite: ECHD 9760 and permission of department.

Each student will supervise two master's-level students in Individual Counseling Practicum. The supervisory sessions will be recorded and critiqued in the supervision course. An updated and systematic understanding of the problems of supervision will be accomplished through a review of the literature. Offered spring semester.

ECHD 9760. Advanced Counseling Psychology Practicum. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised psychological counseling practice in a setting consistent with the student's professional goals. Non-Traditional Format: Practicum. Offered fall, spring, and summer semesters.

ECHD 9780. Advanced Group Work Practicum. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ECHD 9640 and permission of department.

Supervised practice in group work with opportunities for practical experiences in diverse settings. Non-Traditional Format: Practicum. Not offered on a regular basis.

ECHD 9830. Administrative Internship in Student Affairs Administration. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 9400 and permission of department.

Advanced supervised experience in an applied higher education administrative setting. Non-Traditional Format: Doctoral internship under super-

vision of faculty and site staff. Offered fall, spring, and summer semesters.

ECHD 9840. Research Internship in Student Affairs Administration. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 9400 and permission of department.

Advanced supervised experience in an applied higher education research setting. Non-Traditional Format: Doctoral internship under supervision of faculty and site staff. Offered fall, spring, and summer semesters.

ECHD 9850. Teaching Internship in Student Affairs Administration. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ECHD 9400 and permission of department.

Advanced supervised experience in an applied higher education teaching setting. Non-Traditional Format: Doctoral internship under supervision of faculty and site staff. Offered fall, spring, and summer semesters.

ECHD 9860. Internship in Counseling Psychology. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ECHD 9760 and permission of department.

An advanced supervised experience in an applied setting. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

ECHD 9970. Educational Research in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 12 hours credit. Prerequisite: Permission of department.

Designed for advanced graduate students to accommodate research in current psychological, vocational, educational and developmental trends, unique interests and special research efforts. Not offered on a regular basis.

Educational Leadership

C. Thomas Holmes, *Head and Graduate Coordinator, 542-0913*
(*River's Crossing*)

EDUL 6990. Research Seminar in Educational Leadership. 1-6 hours. Repeatable for maximum 6 hours credit.

Research projects and critiques of the literature in educational leadership. Offered every year on a regular basis.

EDUL 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

EDUL 7010. Curriculum Foundations and History. 4 hours.

Social, historical, and professional foundations of curriculum theory and development. Offered every year on a regular basis.

EDUL 7020. Supervision of Instruction. 4 hours.

The basic concepts of supervision, its contribution to the total school program, and means of improving instruction through supervision. Offered every year on a regular basis.

EDUL 7030. Organizational Leadership in Schools. 4 hours.

Theories, models, and research focusing on the development of a reflective-critical understanding of school leadership. Offered every year on a regular basis.

EDUL 7040. School Law. 4 hours.

Legal principles applied to educational institutions, including federal and state constitutional provisions, legislation, administrative regulations, and case law. Offered every year on a regular basis.

EDUL 7050. Personnel Administration and Staff Development. 4 hours.

Principles, policies, and procedures for employer-employee relationships in school systems. Comprehensive planning and implementation of staff development programs in schools. Emphasis is on human resource management. Offered every year on a regular basis.

EDUL 7060. School Business and Resource Management. 4 hours.

Business management functions, with emphasis given to the budgeting process, accountability, and educational efficiency. Offered every year on a regular basis.

EDUL 7090. Instructional Development. 2 hours.

The basic nature of classroom instruction, key elements of the instructional process, organizing operations, and skills for evaluating and improving instruction. Not offered on a regular basis.

EDUL 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered every year on a regular basis.

EDUL 7600. Research in Educational Leadership. 4 hours.

The types of educational research and issues in research design and methodology in educational leadership. Offered every year on a regular basis.

EDUL 7650. Applied Project in Educational Leadership. 3 hours. Repeatable for maximum 9 hours credit.

Study of a problem in administration, curriculum, instruction, or supervision. A proposal for study must be approved by a faculty member. Non-Traditional Format: Applied project under the direction of a faculty member. Offered every year on a regular basis.

EDUL 7800. Practicum in Educational Leadership. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Guided and supervised learning opportunities allowing students to test principles in the field and to relate theory to practice in actual institutional settings. Non-Traditional Format: Field experience supervised jointly by faculty and practitioners. Offered every year on a regular basis.

EDUL 8000. Special Problems in Educational Leadership. 1-4 hours. Repeatable for maximum 4 hours credit.

Projects designed to provide specialized training appropriate to the needs of the individual. The project may involve intensive library investigation or the collection and analysis of original data pertinent to a given problem. Offered on a regular basis.

EDUL 8020. Curriculum Development and Evaluation. 4 hours.

Principles of curriculum development and evaluation for the improvement of the life and program of schools. Offered on a regular basis.

EDUL 8040. Social Psychology of Schools. 3 hours.

The organizational and cultural factors that contribute to the formation of teacher and student identities. Practices such as tracking, assignment of students to special education, extra-curricular activities, evaluation, rewards, and peer influences will be considered in terms of their implications for self development and understanding. Offered on a regular basis.

EDUL 8050. Organizational Development and Change. 2 hours.

Organizational effectiveness and the quality of work life emphasizing the processes of planning and implementing changes to the culture/climate of the individuals in a school and the school as a system using sociology and social psychology research methodologies. Offered on a regular basis.

EDUL 8070. Ethics in Educational Leadership. 3 hours.

The various ethical dimensions of educational leadership, involving both content and process. Offered on a regular basis.

EDUL 8090. Economics of Education. 2 hours. Economic forces, including those involved in financing public schools. Offered on a regular basis.

EDUL 8120. Public School Superintendency. 2 hours.

The roles and responsibilities of the public school superintendent. Offered on a regular basis.

EDUL 8130. Trends and Issues in Educational Leadership. 3 hours. Repeatable for maximum 9 hours credit.

Selected issues in educational leadership. Offered on a regular basis.

EDUL 8140. Schools as a Social System. 3 hours.

Schools viewed as one social system within the matrices of other social systems. Offered every year on a regular basis.

EDUL 8200. Educational Facilities Planning. 4 hours.

Principles, concepts, processes, and practices of planning and evaluating educational facilities. Offered on a regular basis.

EDUL 8210. Education Policy Analysis. 4 hours.

The context, causes, and consequences of education policy. Offered on a regular basis.

EDUL 8240. Group Development in the Schools. 3 hours.

Organizational development, group development, communications, role behaviors, leadership, goal setting, problem-solving, conflict reduction, and decision making. Offered on a regular basis.

EDUL 8250. Designing Educational Learning Environments. 2 hours.

The conceptual framework for employing modern technology in the design of schools. Offered on a regular basis.

EDUL 8260. Designing Outside Learning Environments for Schools. 2 hours.

Design of outdoor learning spaces for schools that fit curriculum specifications for playgrounds, nature trails, and other environments. Offered on a regular basis.

EDUL 8270. Managing School Design and Construction. 4 hours.

Planning and managing the design phase of schools, bidding, evaluating architectural designs, and managing the construction phase. Offered on a regular basis.

EDUL 8290. Politics of Education. 4 hours.
Local, state, federal, and nongovernmental political influences operating in the public schools. Offered on a regular basis.

EDUL 8390. School-Community Relations. 3 hours.

Building a sound school-community relations program involving teachers, parents, community members, industry, and government. Offered on a regular basis.

EDUL 8410. Administration and Supervision of Special Education. 4 hours.

The needs of exceptional children with particular emphasis on planning and implementing comprehensive special education programs, including a supervised field experience. Non-Traditional Format: Includes a supervised field experience. Offered on a regular basis.

EDUL 8990. Research Seminar in Educational Leadership. 1-6 hours. Repeatable for maximum 9 hours credit.

Research topics in educational leadership, including the preparation of a dissertation prospectus. Offered on a regular basis.

EDUL 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

EDUL 9040. Curriculum Theory and Policy. 4 hours.

Analysis and evaluation of competing curriculum theories and their implications for educational policy and practice. Offered on a regular basis.

EDUL 9170. Seminar in School Law. 2 hours. Repeatable for maximum 4 hours credit.

Specific areas of school law mutually agreed upon by the student and instructor. Offered on a regular basis.

EDUL 9220. Strategic Planning in Educational Leadership. 2 hours.

Strategic planning theory and concepts. Offered on a regular basis.

EDUL 9250. Supervision Theory. 2 hours.

Forces impinging upon education and the implications of these findings for supervision. Offered on a regular basis.

EDUL 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral

dissertation. Offered every year on a regular basis.

EDUL 9620. Directed Doctoral Readings. 1-9 hours. Repeatable for maximum 9 hours credit.

Specialized study while enrolled for a doctoral degree under the direction of a major professor. Non-Traditional Format: Independent reading under the supervision of a major professor. Offered on a regular basis.

EDUL 9630. Critique of the Literature in Educational Leadership. 3 hours. Repeatable for maximum 9 hours credit.

Critical interpretation and evaluation of research and theoretical writing in the field of educational leadership. Offered on a regular basis.

EDUL 9700. Internship in Educational Leadership. 1-9 hours. Repeatable for maximum 9 hours credit.

A study-work program; class or conference study of problems encountered by the intern with remainder of time in application of principles to regular job. Non-Traditional Format: Internship under the supervision of faculty and practitioner. Offered on a regular basis.

Educational Psychology

Carl J Huberty, *Head*

Joseph M. Wisenbaker, *Graduate*

Coordinator, 542-4257

(Aderhold Hall)

The department's primary missions are to prepare highly skilled professionals to serve in academe and other settings, and to enhance the theoretical and technical training of graduate students. For its own graduate students, the department provides preparation to those who would serve as school psychologists, as specialists in gifted/creative education, cognition and development, and as evaluation and research methodologists. Students in programs outside the department are provided with general training in learning and development and in quantitative and qualitative research methods.

The department offers programs of study leading to MEd, MA, EdS, EdD and PhD degrees. Program areas include applied cognition and development, gifted/creative

education, research design in education, and school psychology. The department also includes the Torrance Center for Creative Studies and the School Psychology clinic.

The school psychology programs meet the applicable standards of the Georgia Department of Education, the National Association of School Psychologists, and the American Psychological Association.

Educational Psychology

EPSY 4000/6000. Independent Study in Educational Psychology. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent study agreed upon by the student and sponsoring professor. Non-Traditional Format: Prior arrangement with professor is made for course work assignment and hours to be completed. Offered on a regular basis.

EPSY 4310/6310. Prevention and Remediation of Classroom Behavior Problems. 3 hours.

Prevention and management of classroom behavior problems using behavioral, humanistic, and motivational strategies. Focuses on prevention of problem behaviors through effective teaching and classroom design. Offered on a regular basis.

EPSY 6010. Foundations of Human Development for Education. 3 hours.

The interactive influences of biology, family, culture, and extended environment on children's emotional, social, and cognitive development during the school years. The implications of regularities and diversity in development for teaching and learning and on principles of educational practice to enhance development. Offered on a regular basis.

EPSY 6060. Foundations of Motivation for Education. 3 hours.

Current theory and research in motivation and motivational processes. The goal is to help students develop a foundational understanding of motivational constructs in the educational setting. Offered on a regular basis.

EPSY 6160. Study of Problems in Educational Psychology. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Special topics in educational psychology for master's level students. Non-Traditional Format: Prior arrangement with professor is made for course work assignment and hours to be completed. Offered on a regular basis.

EPSY 6240. Child Psychopathology and Schooling. 3 hours.

Etiology and typical behaviors of children with major psychological and psychiatric disorders. Special emphasis is given to diagnostic criteria. DSM-IV and Special Education classification systems are presented. Impact of these disorders on schooling is a major focus. Offered on a regular basis.

EPSY 6300. Introduction to School Psychology and School-Based Services. 3 hours.

History, functions, duties, and responsibilities of psychologists in schools and other applied settings serving children, adolescents, and families relative to schooling issues. Roles of school psychologists in special education diagnosis and placement and other service delivery models in schools. Offered on a regular basis.

EPSY 6800. Foundations of Cognition for Education. 3 hours.

Prerequisite: EPSY 2020 or PSYC 1101.

Cognitive psychology as applied to education. Cognitive theories, models, and processes are applied to the teaching and learning of school skills and content areas. Processes such as attention, critical thinking, concept formation, language, memory, and problem solving are examined. Cognitive psychology principles are used to examine and refine instructional methods. Offered on a regular basis.

EPSY 6990. Master's Seminar in Educational Psychology. 1-6 hours. Repeatable for maximum 12 hours credit.

Seminar in educational psychology dealing with review of research projects and literature critiques. Non-Traditional Format: Lecture/discussion pertaining to selected educational psychology topics. Offered on a regular basis.

EPSY 7000. Master's Research. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

EPSY 7060. Assessment of Gifted Children and Youth. 3 hours.

Prerequisite: ERSB 4600/6600.

Measurement of intellectual and creative abilities for identification and evaluation, with a focus on administering and scoring the Torrance Tests of Creative Thinking; assessment of abilities in special populations of the gifted. Offered on a regular basis.

EPSY 7100. Individual Assessment of Development. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: EPSY 7060.

The measurement of intellectual, academic, and adaptive behavior development, and screening. Offered on a regular basis.

EPSY 7110. Characteristics of Gifted Children and Youth. 3 hours.

Prerequisite: EPSY 2020.

Psychological characteristics of gifted children and youth, including studies of the lives of eminent persons, empirical studies of gifted children and youth today, and models for identifying gifted children. Offered on a regular basis.

EPSY 7160. Special Problems in Applied Cognition and Development. 3 hours. Repeatable for maximum 6 hours credit.

Selected issues in applied cognition and/or development of particular interest to educational practitioners in a seminar setting. Examples include uses of cooperative grouping, multicultural issues in cognition and learning, teaching metacognitive strategies, and techniques for motivating students. Offered on a regular basis.

EPSY 7200. Diagnosis of Social-Emotional Behavior in Education. 3 hours.

Administration, scoring, and interpretation of test materials designed to diagnose social and emotional adjustment problems in school children. Emphasis is given to the effects of social and emotional adjustment on adjustment in schools. Offered on a regular basis.

EPSY 7210. Multicultural Gifted and Talented Education. 3 hours.

Prerequisite: Permission of department.

Theories, research, and practice concerned with recognizing and developing the gifts and talents of children from diverse cultural backgrounds. Contemporary and historical perspectives will be provided on attributes of strength, self-perceptions of ability, family factors, environmental factors, and assessment tools and procedures. Offered on a regular basis.

EPSY 7230. Strategies and Materials for the Gifted. 3 hours.

Prerequisite: EPSY 7110 or permission of department.

Teaching strategies and related instructional materials for the gifted student. Offered on a regular basis.

EPSY 7250. Program and Curriculum Development for the Gifted. 3 hours.

Prerequisite: EPSY 7110.

Program planning for gifted students, including curriculum inventory and development, program, models, and evaluation. Offered on a regular basis.

EPSY 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

EPSY 7310. Consultation Processes in Educational Settings. 3 hours.

Problems in interprofessional communication among school psychologists, teachers, and parents. Social influence processes among these communicators are also discussed. Offered on a regular basis.

EPSY 7320. Individual Psychoeducational Intervention. 3 hours.

Individual and family treatment approaches to a number of child and adolescent psychopathologies common in schools, with emphasis primarily on cognitive-behavioral interventions. Offered on a regular basis.

EPSY 7650. Applied Project in Educational Psychology. 3 hours.

Functional study of a topic or problem in applied cognition and development, gifted and creative education, research methods and measurement, or school psychology. Non-Traditional Format: Independent work on a student-professor selected topic. Offered on a regular basis.

EPSY 7700. Infant and Preschool Assessment. 3 hours.

Prerequisite: EPSY 7100.

Administration, scoring, and interpretation of major measurement instruments used in early childhood. Special emphasis is placed on the educational implications of test findings. Offered on a regular basis.

EPSY 8060. Advanced Seminar in Motivation for Education. 3 hours.

Prerequisite: EPSY 6010 or EPSY 6060.

Examines research on goals, expectancy, self-efficacy beliefs, and attributional beliefs. The focus will be on primary sources that are theory-based and research oriented. Offered on a regular basis.

EPSY(LING)(PSYC) 8130. Psycholinguistics. 3 hours.

Recent theoretical and experimental work on the psychological aspects of semantics, grammar, and discourse processes are surveyed. Language development is also considered. Offered on a regular basis.

EPSY 8160. Special Topics in Educational Psychology. 3 hours. Repeatable for maximum 12 hours credit.

Selected topics in applied cognition and development, gifted and creative education, research

methods and measurement, or school psychology. Offered on a regular basis.

EPSY 8180. Psychology of Learning and Instruction. 3 hours.

Prerequisite: EPSY 6800.

The role that psychology plays in the instructional process. Advanced psychological theories and models are applied to learning in schools and other educational settings. The implications of current cognitive science research for improving teaching and learning at all developmental levels. Offered on a regular basis.

EPSY 8190. Achievement and Intelligence. 3 hours.

Prerequisite: EPSY 6800.

Examines theories of intelligence and achievement. Different theories, including psychometric, social, and genetic theories of the development of intelligence and achievement. Offered on a regular basis.

EPSY 8200. Learning Difficulties of Gifted Children and Youth. 3 hours.

Prerequisite: Permission of department.

Teaching gifted students with special needs, including dual exceptionalities, limited English proficiency, gender issues, cultural implications, and special needs because of age, type of giftedness, and degree of exceptionality. Offered on a regular basis.

EPSY 8220. Theories of Creativity. 3 hours.

Prerequisite: Permission of department.

Theory and research concerned with the creative process, creative problem solving, creative thinking abilities and their measurement, the creative personality, and environmental and classroom conditions that facilitate creative functioning and development. Offered on a regular basis.

EPSY 8240. Creativity: Instructional Procedures and Problem Solving Processes. 3 hours.

Prerequisite: Permission of department.

Basic theory and practice of creative thinking techniques, including ideation strategies and group problem solving techniques. Offered on a regular basis.

EPSY 8340. Child Neuropsychology. 3 hours.

Prerequisite: PSYC 6910.

Normal and abnormal development of the central nervous system; functional organization of the brain in children and adolescents; neuropsychological basis of developmental learning disabilities, ADHD, and other behavioral/psychiatric disorders; traumatic brain injury; pediatric neurological syndromes and diseases; neurodiagnostic and neuropsychological assessment procedures. Offered on a regular basis.

EPSY 8700. Practicum in Applied Cognition and Development. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Supervised practice in approved setting for conducting work relevant to applications of cognitive or developmental theory to education. Non-Traditional Format: Student will be doing independent practicum full-time. Offered on a regular basis.

EPSY 8710. Practicum in Gifted and Creative Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: EPSY 7060 and EPSY 7230 and EPSY 7250.

Supervised learning opportunities allowing students to test basic principles and techniques in gifted and creative education and to relate theory to practice in selected settings. Non-Traditional Format: Supervised experience in the field of gifted and creative education. Offered on a regular basis.

EPSY 8720. Practicum in School Psychology. 1-9 hours. Repeatable for maximum 40 hours credit.

Prerequisite: EPSY 6240 and EPSY 7100 and EPSY 7200 and EPSY 7320.

Supervised practicum in the school psychology clinic or other approved institutional settings. Non-Traditional Format: Students practice in applied settings as determined by the supervising psychologist. Offered on a regular basis.

EPSY 8750. Practicum in College Teaching. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Supervised practice in teaching at the college level. Students will develop skills in course organization, resource identification, lesson planning and delivery, student assessment, and techniques for course improvement. Non-Traditional Format: Supervised experiences in the field of educational psychology. Offered on a regular basis.

EPSY 8900. Internship in School Psychology. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: EPSY 7100 and EPSY 7200 and EPSY 7320.

Supervised practice in approved school psychology institutional settings. Non-Traditional Format: Practice in a school or related setting supervised by a professional psychologist. Offered on a regular basis.

EPSY 8990. Doctoral Seminar in Educational Psychology. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Seminar for doctoral level students in educational psychology dealing with review of research projects and critiques of literature. Non-Traditional

Format: Lecture/discussion pertaining to selected educational psychology topics. Offered on a regular basis.

EPSY 9000. Doctoral Research. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

EPSY 9140. Individual Clinical Measurement Consultation. 3 hours.

Prerequisite: EPSY 7100 and EPSY 7110.

Prepares the advanced student in applied educational psychology to deliver indirect measurement and assessment services in educational settings. Sample measurement services include parent and teacher educational services, dimensional and actuarial classification schemes, screening, and other topics. Offered on a regular basis.

EPSY 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

EPSY 9330. Advanced Psychological Interventions in Schools. 3 hours.

Prerequisite: EPSY 7320.

Critical interpretation and evaluation of research and theoretical writing related to selected psychoeducational interventions. Offered on a regular basis.

EPSY 9510. Topics in School Psychology. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Critical evaluation of literature, research, policy, and practice relating to specific issues in school psychology. Offered on a regular basis.

EPSY 9620. Professional Practice of Psychology in Education. 3 hours.

Prerequisite: EPSY 6300.

Familiarizes the advanced students in applied educational psychology with professional practice issues such as licensure/certification, business planning, ethical and legal issues, interdisciplinary collaboration, and professional identity development. An emphasis will be placed on the integration of science and practice. Offered on a regular basis.

EPSY 9630. Critique of Literature in Educational Psychology. 3 hours.

Prerequisite: ERSB 4200/6200.

Critical interpretation and evaluation of research and theoretical writing in educational psychology. Offered on a regular basis.

EPSY 9700. Internship in Applied Cognition and Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

A study-work program in applied cognition and development. Class or conference study of problems encountered by the intern with remainder of time in application of principles to professional practice. Non-Traditional Format: Student will be doing out-of-class work. Offered on a regular basis.

EPSY 9710. Internship in Gifted and Creative Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Advanced experiences providing students with opportunities to refine competencies related to innovative and experimental application of principles and techniques in selected settings under the supervision of gifted and creative education faculty. Non-Traditional Format: Supervised experience in the field of gifted and creative education. Offered on a regular basis.

EPSY 9720. Advanced Internship in School Psychology. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: EPSY 6240 and EPSY 7100 and EPSY 7200 and EPSY 7320.

Supervised practice in approved school psychology institutional settings. Non-Traditional Format: Practice in a school or related setting supervised by a professional psychologist. Offered on a regular basis.

Educational Research and Measurement

ERSB 4200/6200. Methods of Research in Education. 3 hours.

Diverse research approaches used in behavioral science settings, including critical review and interpretation of published research. Offered on a regular basis.

ERSB 4600/6600. Applied Educational Assessment. 3 hours.

Development, administration, scoring, analysis, and interpretation of classroom educational assessments used in the service of instruction and accountability objectives. Traditional as well as current approaches (portfolios, performance assessments). Although classroom approaches are emphasized, standardized measures are also studied. Offered on a regular basis.

ERSB 6300. Applied Statistical Methods in Education. 3 hours.

Prerequisite: ERSB 4200/6200.

Techniques for describing and summarizing data for educational research studies. Applications of the standard normal distribution and the use and interpretation of standard scores. Inferential statistics for one and two population studies including means, proportions, and correlations. Offered on a regular basis.

ERSH 7250. Educational Program and Project Evaluation. 3 hours.

Prerequisite: ERSH 4600/6600 and ERSH 6300. Innovative or ongoing educational programs, projects, or curricula. Consideration is made of goal specification, data collection, standard setting, and reporting. Interdisciplinary points of view are stressed. Offered on a regular basis.

ERSH 7400. Qualitative Research in Education. 3 hours.

Prerequisite: Permission of department. Foundations of qualitative design: history, philosophy, nature, types, examples, and assessment. Reading and evaluating reports of qualitative research in education and identifying methodological issues. Not offered on a regular basis.

ERSH 7600. Construction of Educational Measuring Instruments. 3 hours.

Prerequisite: ERSH 4600/6600 and ERSH 6300. Hands-on experience in instrument development, especially in the affective domain. Scaling methods will be considered in addition to actual item and reliability analyses. Techniques such as Likert, Thurstone, and Osgood's semantic differential method. Offered on a regular basis.

ERSH 8310. Applied Analysis of Variance Methods in Education. 3 hours.

Prerequisite: ERSH 6300. Experimental design and the analysis of data from experiments, including orthogonal analysis of variance for single and multifactor designs, randomized block, repeated measures, and mixed models. Computer applications and the reporting results using APA style. Not offered on a regular basis.

ERSH 8320. Applied Correlation and Regression Methods in Education. 3 hours.

Prerequisite: ERSH 8310. Nonexperimental and quasi-experimental research studies, including simple and multiple regression techniques, nonorthogonal analysis of variances, correlation techniques, and analysis of covariance. Offered on a regular basis.

ERSH 8350. Multivariate Methods in Education. 3 hours.

Prerequisite: ERSH 8320. Discriminant analysis, multivariate analysis of variance, canonical correlation analysis, and cluster analysis. Relating research questions to methods, conducting computer analyses, interpreting computer printouts, and critiquing analysis reports. Offered on a regular basis.

ERSH 8410. Qualitative Data Collection in Education. 3 hours.

Prerequisite: ERSH 7400.

Disciplinary origins and cross-disciplinary uses, variations, applications, and evaluations of methods of collecting qualitative data. Choice of methods in the overall construction of qualitative designs, practice in selecting and collecting qualitative data for educational research, and examination of naturalistic data in the educational literature. Not offered on a regular basis.

ERSH 8420. Qualitative Data Analysis in Education. 3 hours.

Prerequisite: ERSH 8410 or permission of department.

Approaches to analysis in the design of qualitative research studies. Procedures are surveyed and compared from a range of social science and professional disciplines for use in studying educational problems and topics. Offered on a regular basis.

ERSH 8510. Theories in Qualitative Design in Education. 1-3 hours. 1-3 lab periods of 2 hours per week.

Prerequisite: ERSH 8410 or permission of department.

Theories in qualitative research design and conduct. Theories commonly used in qualitative approaches to educational problems and issues; sociocultural, psychosocial, critical, feminist, and postmodern theories. Offered on a regular basis.

ERSH 8520. Interviewing in Educational Research. 1-3 hours. 1-3 lab periods of 2 hours per week.

Prerequisite: ERSH 8410 or permission of department.

Conceptual framework for interviewing, approaches associated with various disciplines and schools of inquiry, forms and structures interviewing takes, the criteria developed to assess interviews, and interviewing practice across a variety of situations. Recording, analyzing, and reporting interview data, ethical and relationship issues, and research on interviewing methods. Offered on a regular basis.

ERSH 8530. Case Study Research in Education. 1-3 hours. 1-3 lab periods of 2 hours per week.

Prerequisite: ERSH 8410 or permission of department.

Case study as a research design. Topics are types of case studies, defining the case, site and sample selection, data collection methods, within-case and cross-case analysis, and writing case reports. Offered on a regular basis.

ERSH 8540. Participant Observation in Educational Research. 1-3 hours. 1-3 lab periods of 2 hours per week.

Prerequisite: ERSH 8410 or permission of department.

Qualitative approaches to observation in education: participant and nonparticipant observation and ethnographic, ethnological, and field study. Choices of such approaches in qualitative design, their development, application, and evaluation, are compared and selected versions are practiced. Offered on a regular basis.

ERSH 8610. Educational Measurement Theory. 3 hours.

Prerequisite: ERSH 8320.

Theoretical basis of classical test theory: statistical treatment of reliability and validity; emphasis on application and interpretation of results through computer analyses. Offered on a regular basis.

ERSH 8620. Item Response Theory. 3 hours.

Prerequisite: ERSH 8610.

Models, statistical methods, and computer applications of item response theory (IRT) to educational and psychological test data. Offered every year on a regular basis.

ERSH 8630. Applications of Item Response Theory. 3 hours.

Prerequisite: ERSH 8620.

Applications of item response theory (IRT) to practical testing problems, including test equating, differential item functioning, computerized adaptive testing, and test construction. Dichotomous and polytomous item response theory models with strong emphasis on computer applications. Offered on a regular basis.

ERSH 8650. Generalizability Theory. 3 hours.

Prerequisite: ERSH 8610.

Application of generalizability theory to educational problems; emphasis on conducting and interpreting computer analyses and critiquing the research literature using generalizability theory; and use of generalizability for evaluating performance assessments. Offered on a regular basis.

ERSH 8700. Practicum in Educational Research. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: ERSH 8320.

Supervised experiences in educational research focusing on the planning, implementation, analysis, and response to scientific inquiries. Non-Traditional Format: Supervised experiences in the field of educational research. Offered on a regular basis.

ERSH 8750. Exploratory and Confirmatory Factor Analysis. 3 hours.

Prerequisite: ERSH 8610.

Traditional exploratory factor analysis procedures and confirmatory factor analysis via covariance modeling. Relating educational measurement questions to conducting and interpreting computer analysis; critiquing research using exploratory/confirmatory factor analysis and

research on the models themselves. Offered on a regular basis.

ERSH 8760. Structural Equation Modeling. 3 hours.

Prerequisite: ERSH 8750.

Structural equation modeling with observed and latent variables. Relating educational research problems to conducting and interpreting computer analysis; critiquing research using structural equation models and research on structural equation models. Offered on a regular basis.

ERSH 9210. Quantitative Design in Education. 3 hours.

Prerequisite: ERSH 8310.

Philosophical, ethical, and procedural aspects of experimental and nonexperimental research in education. Synthesizing and integrating previous research studies, designing quantitative inquiries, measuring outcomes and analyzing data. Offered on a regular basis.

ERSH 9700. Internship in Educational Research. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ERSH 8320.

Supervised experiences outside of the department in educational research; focusing on the planning, implementation, analysis, and reporting of scientific inquiries. Non-Traditional Format: Supervised experiences in the field of educational research. Offered on a regular basis.

ERSH 9800. Issues in Qualitative and Quantitative Research. 1-3 hours. Repeatable for maximum 12 hours credit. 1-3 lab periods of 2 hours per week.

Prerequisite: Permission of major.

Current issues in qualitative and quantitative research methods. Methodological, substantive, and theoretical literature in the areas of measurement, qualitative design, and quantitative data analysis. Offered on a regular basis.

Elementary Education

Brenda H. Manning, *Head*

Judith C. Reiff, *Graduate Coordinator*,

542-4244

(Aderhold Hall)

Early Childhood Education

EDEC 6000. Special Problems in Early Childhood Education. 1-3 hours. Repeatable for maximum 6 hours credit.

Library investigation or the collection and analysis of original data pertinent to a given problem. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

EDEC 6990. Research in Early Childhood Education. 3 hours.

Literature and research related to early childhood education. Emphasis will be placed on locating, evaluating, and interpreting research. Offered fall semester.

EDEC 7010. Trends and Issues in Early Childhood Education. 3 hours.

Current and past trends and issues in the education of children in prekindergarten through grade five. Offered spring and summer semesters.

EDEC 7020. Theory and Curriculum in Early Childhood Education. 3 hours.

Theory and curricula in early childhood education. Offered fall and summer semesters.

EDEC 7050. Problems of Teaching in Early Childhood Education. 3 hours.

Use of problem-solving techniques to identify problems, analyze causes, and develop a repertoire of strategies for elementary school instructional personnel. Not offered on a regular basis.

(EDEC)EDMS 7060. Service Learning. 3 hours.

History, rationale, research, methodology, and outcomes of service learning. Students will conceptualize, plan, and participate in a service learning project. Emphasis is on how service can be incorporated into curriculum with a primary focus on learning. Not offered on a regular basis.

EDEC 7110. The Educational Role of Play in Early Childhood Education. 3 hours.

Prerequisite: Permission of department.
The cognitive and affective aspects of the play of children in prekindergarten through grade five. Techniques for facilitating children's play. Not offered on a regular basis.

EDEC(EDMS) 7120. Children's Social Lives. 3 hours.

Race, gender, and class as explanatory frameworks for incidents in young children's everyday lives and approaches for culturally responsive teaching. Not offered on a regular basis.

EDEC(EDMS) 7130. Teaching Styles in the Elementary Classroom. 3 hours.

Theoretical foundations of selected teaching styles, including the planning and developing of teaching strategies which reflect these styles. Not offered on a regular basis.

EDEC(EDEL) 7160. Instructional Strategies for Early Childhood Education. 3 hours.

Curricular approaches and research on instructional strategies to meet the needs of children in prekindergarten through grade five. Not offered on a regular basis.

EDEC(EDEL) 7170. Evaluation of the Elementary School. 3 hours.

Components of evaluation, appropriate evaluation techniques, procedures, collection, and utilization of research data for improving elementary schools. Not offered on a regular basis.

EDEC 7420. Organization of Early Childhood Classrooms. 3 hours.

Prerequisite: (SPED 2000 and SPED 2000L) or (SPED 7000 and permission of department).

Principles and practices which are germane to organizing and operating the classroom for learners in prekindergarten through grade five. Students will acquire knowledge of important theoretical approaches in this area as well as practical skills applicable to their work with young children. Not offered on a regular basis.

EDEC 7460. Internship in Teaching Early Childhood Education. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.
A prekindergarten through grade five classroom teaching experience under the direction of a teacher and an early childhood education faculty member. Non-Traditional Format: Student teaching/field based in schools. Offered fall and spring semesters.

EDEC 7650. Literature Review in Early Childhood Education. 3 hours.

Preparation of a literature review on a topic of interest related to early childhood education. Offered spring semester.

(EDEC)EDMS 8010. Teacher Action Research. 3 hours.

Prerequisite: ERSB 4200/6200.
Teacher action research at the classroom, team, school, and inter-school levels. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8020. Self-Instruction for Classroom Processes. 3 hours.

Prerequisite: EDMS 7080.
Theoretical and research backgrounds of self-instruction (SI) to improve memory, comprehension, problem-solving, and behavioral self-control of both elementary (K-8) teachers and students. Includes teacher introspection, classroom strategies, and management. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8050. Theory and Research on Teaching. 3 hours.

Research on teaching, including teachers' thought processes, students' thought processes, effective teacher behavior, classroom organization, and classroom discourse. Not offered on a regular basis.

(EDEC)(EDEL)EDMS 8070. Research on Teacher Education: PreK-Grade 8. 3 hours.
The history of teacher education, the process of becoming a teacher, and approaches to teacher education. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8100. Theories and Research on Teachers' Thinking. 3 hours.
Knowledge and self-regulation of teachers' thinking about their own cognitive, social, emotional, and physical development in classrooms. Theoretical considerations, relevant research, and applied practice. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8110. Methods for Observing Children in Schools. 3 hours.
Process of designing and conducting observational methods projects. Observing children in natural habitats, such as school and community. Topics include entering the field, forming categories, sampling and recording rules, measurement, reliability, and validity. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8120. Social Constructivist Approaches to Understanding Classroom Motivation. 3 hours.
Constructs of motivation; how classroom cultures, ways of knowing, particular pedagogies, and assessment practices affect student motivation; qualitative methods accessing perspectives on motivation. Not offered on a regular basis.

(EDEC)EDEL(EDMS) 8140. Cross-Cultural Perspectives on Learning Environments for Children and Young Adolescents. 3 hours.
Cross-cultural perspectives on such topics as the social construction of learning, cultural perspectives on development, and institutionalized patterns of instruction drawn from developed and developing countries. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8150. Family-School-Community Interactions. 3 hours.
Interactive relationships among families, schools, and communities from the interdisciplinary perspectives of anthropology, education, sociology, history, political science, and psychology. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8180. Research in Multicultural Teacher Education. 3 hours.
Multicultural teacher education research, theories, and practices. Opportunities to construct understandings of the political and economic context within which decisions are made, the effect of values on multiple realities, the dominant forces in society, and the impact of culture on the individual in teacher education contexts. Not offered on a regular basis.

EDEC(EDEL)(EDMS) 8190. Mentoring in Learning to Teach. 3 hours.
Description, analysis, and appraisal of mentoring for pre-service and in-service teachers, and an

examination of content, processes, roles, and responsibilities in interactions of mentors and teachers of prekindergarten through grade eight. Not offered on a regular basis.

EDEC 8990. Research Seminar in Early Childhood Education. 1-6 hours. Repeatable for maximum 12 hours credit.
Seminars on topics related to early childhood education. Non-Traditional Format: Doctoral/research seminars. Offered fall and spring semesters.

EDEC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of department.
Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EDEC 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.
Prerequisite: Permission of department.
Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

EDEC 9600. Educational Research in Early Childhood Education. 1-9 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of department.
Independent research in the area of early childhood education under the direction of faculty. Non-Traditional Format: Doctoral/independent research projects. Offered fall, spring, and summer semesters.

EDEC 9630. Critique of Educational Literature in Early Childhood Education. 3 hours.
Prerequisite: ERSR 4200/6200.
Interpretation and evaluation of research and theoretical writing in early childhood education. Non-Traditional Format: Also offered as individualized critiques of literature. Offered fall, spring, and summer semesters.

EDEC 9800. University Teaching Practicum in Early Childhood Education. 1-9 hours.
University teaching experience under the direction of a tenured faculty member noted for outstanding university teaching. Non-Traditional Format: Students apprentice with an exemplary university teacher to learn first-hand the theory, research, and practice particular to University teaching. Offered fall, spring, and summer semesters.

Elementary Education

(EDEL)EDEC 7160. Instructional Strategies for Early Childhood Education. 3 hours.

Curricular approaches and research on instructional strategies to meet the needs of children in prekindergarten through grade five. Not offered on a regular basis.

(EDEL)EDEC 7170. Evaluation of the Elementary School. 3 hours.

Components of evaluation, appropriate evaluation techniques, procedures, collection, and utilization of research data for improving elementary schools. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8020. Self-Instruction for Classroom Processes. 3 hours.

Prerequisite: EDMS 7080.

Theoretical and research backgrounds of self-instruction (SI) to improve memory, comprehension, problem-solving, and behavioral self-control of both elementary (K-8) teachers and students. Includes teacher introspection, classroom strategies, and management. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8050. Theory and Research on Teaching. 3 hours.

Research on teaching, including teachers' thought processes, students' thought processes, effective teacher behavior, classroom organization, and classroom discourse. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8070. Research on Teacher Education: PreK-Grade 8. 3 hours.

The history of teacher education, the process of becoming a teacher, and approaches to teacher education. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8100. Theories and Research on Teachers' Thinking. 3 hours.

Knowledge and self-regulation of teachers' thinking about their own cognitive, social, emotional, and physical development in classrooms. Theoretical considerations, relevant research, and applied practice. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8110. Methods for Observing Children in Schools. 3 hours.

Process of designing and conducting observational methods projects. Observing children in natural habitats, such as school and community. Topics include entering the field, forming categories, sampling and recording rules, measurement, reliability, and validity. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8120. Social Constructivist Approaches to Understanding Classroom Motivation. 3 hours.

Constructs of motivation; how classroom cultures, ways of knowing, particular pedagogies,

and assessment practices affect student motivation; qualitative methods accessing perspectives on motivation. Not offered on a regular basis.

EDEL(EDEC)(EDMS) 8140. Cross-Cultural Perspectives on Learning Environments for Children and Young Adolescents. 3 hours.

Cross-cultural perspectives on such topics as the social construction of learning, cultural perspectives on development, and institutionalized patterns of instruction drawn from developed and developing countries. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8150. Family-School-Community Interactions. 3 hours.

Interactive relationships among families, schools, and communities from the interdisciplinary perspectives of anthropology, education, sociology, history, political science, and psychology. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8180. Research in Multicultural Teacher Education. 3 hours.

Multicultural teacher education research, theories, and practices. Opportunities to construct understandings of the political and economic context within which decisions are made, the effect of values on multiple realities, the dominant forces in society, and the impact of culture on the individual in teacher education contexts. Not offered on a regular basis.

(EDEL)EDEC(EDMS) 8190. Mentoring in Learning to Teach. 3 hours.

Description, analysis, and appraisal of mentoring for pre-service and in-service teachers, and an examination of content, processes, roles, and responsibilities in interactions of mentors and teachers of prekindergarten through grade eight. Not offered on a regular basis.

EDEL 8990. Research Seminar in Elementary Education. 1-6 hours. Repeatable for maximum 12 hours credit.

Seminars on topics related to elementary education. Non-Traditional Format: Doctoral/research seminars. Offered fall and spring semesters.

EDEL 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EDEL 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral

dissertation. Offered fall, spring, and summer semesters.

EDEL 9600. Educational Research in Elementary Education. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent research in elementary education under the direction of faculty. Non-Traditional Format: Doctoral/independent study. Offered fall, spring, and summer semesters.

EDEL 9630. Critique of Educational Literature in Elementary Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ERS 4200/6200.

Critical interpretation and evaluation of research and theoretical writing in elementary education. Non-Traditional Format: Also offered as individualized critiques of literature. Offered fall, spring, and summer semesters.

Middle School Education

EDMS 6000. Special Problems in Middle School Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Independent study of educational problems related to middle school education. Non-Traditional Format: Individual/special projects. Offered fall, spring, and summer semesters.

EDMS 6990. Research Seminar in Middle School Education. 3 hours.

Prerequisite: Permission of department.

Literature and research related to the middle school. Offered fall semester.

EDMS 7030. The Middle School. 3 hours.

Research supporting the concept of a separate organization and program for youngsters ten to fourteen years of age, types of curricular plans for the middle school, aspects of teaching in the middle school, and the organization and staff of the middle school. Not offered on a regular basis.

EDMS 7050. Teaching Young Adolescents. 3 hours.

Examines literature about research and practice to develop a repertoire of teaching strategies for young adolescents. Not offered on a regular basis.

EDMS(EDEC) 7060. Service Learning. 3 hours.

History, rationale, research, methodology, and outcomes of service learning. Students will conceptualize, plan, and participate in a service learning project. Emphasis is on how service can be incorporated into curriculum with a primary focus on learning. Not offered on a regular basis.

EDMS 7080. Curriculum Planning for the Middle School. 3 hours.

Curriculum development based on the unique nature of the middle school learner and content appropriate to physical, intellectual, and emotional development. Not offered on a regular basis.

EDMS 7090. Instructional Strategies for the Middle School. 3 hours.

Instructional strategies to meet unique needs of early adolescents, curricular approaches as related to instructional strategies and program development, major curricular models, and research on instructional strategies for the middle school. Not offered on a regular basis.

EDMS 7100. Evaluation of the Middle School. 3 hours.

Needs for evaluation of middle school, components of evaluation, types of appropriate evaluation techniques, procedures, and utilization of research data for improving middle schools. Not offered on a regular basis.

(EDMS)EDEC 7120. Children's Social Lives. 3 hours.

Race, gender, and class as explanatory frameworks for incidents in young children's everyday lives and approaches for culturally responsive teaching. Not offered on a regular basis.

(EDMS)EDEC 7130. Teaching Styles in the Elementary Classroom. 3 hours.

Theoretical foundations of selected teaching styles, including the planning and developing of teaching strategies which reflect these styles. Not offered on a regular basis.

EDMS 7460. Internship in Middle School. 1-9 hours.

Prerequisite: Permission of department.

Supervised professional laboratory experience in a selected middle school under the direction of a faculty member. Non-Traditional Format: Student teaching/field based in schools. Offered spring semester.

EDMS 7650. Literature Review in Middle School Education. 3 hours.

Prerequisite: EDMS 6990.

Preparation of a literature review on a topic related to middle school education. Offered spring semester.

EDMS(EDEC) 8010. Teacher Action Research. 3 hours.

Prerequisite: ERS 4200/6200.

Teacher action research at the classroom, team, school, and inter-school levels. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8020. Self-Instruction for Classroom Processes. 3 hours.

Prerequisite: EDMS 7080.

Theoretical and research backgrounds of self-instruction (SI) to improve memory, comprehen-

sion, problem-solving, and behavioral self-control of both elementary (K-8) teachers and students. Includes teacher introspection, classroom strategies, and management. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8050. Theory and Research on Teaching. 3 hours.

Research on teaching, including teachers' thought processes, students' thought processes, effective teacher behavior, classroom organization, and classroom discourse. Not offered on a regular basis.

EDMS(EDEC)(EDEL) 8070. Research on Teacher Education: PreK-Grade 8. 3 hours.

The history of teacher education, the process of becoming a teacher, and approaches to teacher education. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8100. Theories and Research on Teachers' Thinking. 3 hours.

Knowledge and self-regulation of teachers' thinking about their own cognitive, social, emotional, and physical development in classrooms. Theoretical considerations, relevant research, and applied practice. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8110. Methods for Observing Children in Schools. 3 hours.

Process of designing and conducting observational methods projects. Observing children in natural habitats, such as school and community. Topics include entering the field, forming categories, sampling and recording rules, measurement, reliability, and validity. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8120. Social Constructivist Approaches to Understanding Classroom Motivation. 3 hours.

Constructs of motivation; how classroom cultures, ways of knowing, particular pedagogies, and assessment practices affect student motivation; qualitative methods accessing perspectives on motivation. Not offered on a regular basis.

(EDMS)(EDEC)EDEL 8140. Cross-Cultural Perspectives on Learning Environments for Children and Young Adolescents. 3 hours.

Cross-cultural perspectives on such topics as the social construction of learning, cultural perspectives on development, and institutionalized patterns of instruction drawn from developed and developing countries. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8150. Family-School-Community Interactions. 3 hours.

Interactive relationships among families, schools, and communities from the interdisciplinary perspectives of anthropology, education, sociology, history, political science, and psychology. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8180. Research in Multicultural Teacher Education. 3 hours.

Multicultural teacher education research, theories, and practices. Opportunities to construct understandings of the political and economic context within which decisions are made, the effect of values on multiple realities, the dominant forces in society, and the impact of culture on the individual in teacher education contexts. Not offered on a regular basis.

(EDMS)EDEC(EDEL) 8190. Mentoring in Learning to Teach. 3 hours.

Description, analysis, and appraisal of mentoring for pre-service and in-service teachers, and an examination of content, processes, roles, and responsibilities in interactions of mentors and teachers of prekindergarten through grade eight. Not offered on a regular basis.

EDMS 8990. Research Seminar in Middle School Education. 1-6 hours. Repeatable for maximum 12 hours credit.

Seminars on topics related to middle school education. Non-Traditional Format: Doctoral/research seminars. Offered fall and spring semesters.

EDMS 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EDMS 9030. Young Adolescents and Schools. 3 hours.

Adolescence as a historical and cultural concept, research on middle school practices and students' perspectives of schooling, and adolescents' experiences in school and society. Not offered on a regular basis.

EDMS 9080. Theory and Practice in Middle Grades Curriculum. 3 hours.

Current curricular practices in the middle grades, theories on curriculum development, and research on curriculum implementation. Not offered on a regular basis.

EDMS 9090. Socio-Cultural Issues in Early Adolescence. 3 hours.

Social construction of adolescence from a historical and cultural viewpoint, including cross-cultural research on the dynamics of adolescent development. Not offered on a regular basis.

EDMS 9120. Comparative and International Perspectives in Middle Grades Education. 3 hours.

Common issues and problems in the education of young adolescents and the current predicaments of adolescent education. Not offered on a regular basis.

EDMS 9150. School Reform and Young Adolescents. 3 hours.

School reforms and shifts in educational paradigms related to young adolescent development and the schooling of young adolescents from the 1870s to the present. Not offered on a regular basis.

EDMS 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

EDMS 9600. Educational Research in Middle School Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Independent research in middle school education under the direction of faculty. Non-Traditional Format: Doctoral/independent research projects. Offered fall, spring, and summer semesters.

EDMS 9630. Critique of Literature in Middle School Education. 3 hours. Repeatable for maximum 6 hours credit.

Interpretation and evaluation of research and theoretical writing in middle school education. Non-Traditional Format: Also offered as individualized critiques of literature. Offered fall, spring, and summer semesters.

Foundations of Education

EFND 6000. Special Problems in Social Foundations of Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Study of a problem in social foundations of education through library research or collection and analysis of primary data. Non-Traditional Format: Individual study supervised directly by a faculty member. Offered fall, spring, and summer semesters.

EFND 7010. Comparative and International Education. 3 hours.

Theory, policy, and practice in selected educational systems. Examines data and models from educational systems around the world. Critiques important themes: race, ethnicity, class, and gender; the role of education in national development; cross-cultural research; and major development in the methodology of comparative education. Offered on a regular basis.

EFND 7020. History of Education in the United States to 1865. 3 hours.

United States educational history from Colonial America through the Civil War. Offered on a regular basis.

EFND 7030. History of Education in the United States Since 1865. 3 hours.

United States educational history from the end of the Civil War to the present. Offered on a regular basis.

EFND 7100. Gender and Education. 3 hours.

Issues, research, theory, and policy on gender and education. Gender effects in socialization, schooling, and lifelong learning are analyzed for their implications for individuals, society, and culture. Offered on a regular basis.

EFND 7110. The African American Educational Experience. 3 hours.

African American educational experience since 1865. The history of racial discrimination and the ongoing struggle for equal opportunity in American education. Black America's educational leadership, philosophies, tactical disputes, and schools; desegregation process; white reformers and the black community. Offered on a regular basis.

EFND 7120. Sociological Theories of Education. 3 hours.

Theories of social structure, stratification, and social change. Relationships among social institutions and educational processes and outcomes, and how various social institutions contribute to the maintenance of existing structured inequalities. Offered on a regular basis.

EFND 7140. The Social and Cultural Contexts of Teaching. 3 hours.

Perspectives of education and schooling practices that shape teacher-student relations. Teacher preparation programs and school structures in United States society and how these contexts influence and organize the classroom community. Offered on a regular basis.

EFND(ANTH) 7150. Anthropology of Education. 3 hours.

Cultural aspects of educational processes, institutions, and issues in societies around the world organized around comparative analysis. Topics include education as cultural process and social function, as sociocultural structure, as cultural transaction, and as cultural product. Offered on a regular basis.

EFND 7200. Multicultural Education in the United States. 3 hours.

Racial and cultural identity; ways oppression appears in students' lives and schooling policies and practices; connections between gender, feminist, and sexuality issues and education; relationships of empowerment to social changes.

assessment, and evaluation; and associations among knowledge construction, culture, and the learning of school disciplines. Offered on a regular basis.

EFND 8010. Philosophy of Education. 3 hours. Philosophical questions concerning education. Topics include metaphysical, epistemological, and ethical issues of teaching, curriculum, and educational institutions. Offered on a regular basis.

EFND 8040. Pragmatism and Education. 3 hours. Educational writings of William James, Charles S. Pierce, and John Dewey. Offered on a regular basis.

EFND 8060. Social and Political Philosophies of Education. 3 hours. Social and political philosophies of education, such as communism, fascism, and various types of democracy. Offered on a regular basis.

EFND 8070. Ethics and Education. 3 hours. Theories of value and evaluation, ethical discourse and arguments, and other uses of ethics in educational writings. Offered on a regular basis.

EFND 8080. Contemporary Philosophies of Education. 3 hours. Recent developments in the field as revealed in current literature. Topics include foundationalism, self identity, multiculturalism, and equality as they pertain to education. Offered on a regular basis.

EFND 8100. Research in Educational History of the United States. 3 hours. Research methods in the history of education. Not offered on a regular basis.

EFND 8130. Education as Democracy. 3 hours. Two lectures and one 2-hour lab period. Conceptions of public education congruent with principles of democratic society. Topics include foundational works, constitutional interpretations, traditional canons, multiculturalism, post-modernism/critical theory, and relationships between school reform and perspectives on American democracy. Offered on a regular basis.

EFND 8150. Education and Cultural Knowledge. 3 hours. Transmission and transformation of cultural knowledge and symbolic orders in schools and other educational institutions around the world. How culture interacts with beliefs and knowledge and how teachers' and students' belief systems and cultural models interact in social contexts to contribute to continuity and change. Offered on a regular basis.

EFND 8160. Ethnography of Educational Organizations. 3 hours. Educational organizations around the world: their social structures, functions, and ideologies, supplemented by analysis of youth organizations and other agencies with educational goals. Offered on a regular basis.

EFND(ESCI) 8210. Multicultural Education Research. 3 hours. Prerequisite: EFND 7200 and permission of department. Using multicultural education research articles, chapters, and books; familiarization of seminal multicultural education research studies; and a critical analysis of the research done in one area are the foci of the course. Not offered on a regular basis.

EFND 8330. School Reform and Public Education. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: Permission of department. Current attempts to reform public education. Topics include elements of reforms and views of education, policies that obstruct or enhance change, and purposes and consequences of reforms as challenges to conceptions of education, schooling, and society. Offered on a regular basis.

EFND 8400. Critical Race Theory and Education. 3 hours. Theoretical and ideological debates about race, oppression, and power; conceptions of race identity, oppression, resistance, and empowerment in relation to American culture and society; critiques of social, historical, and cultural shapes of race theories. Offered on a regular basis.

EFND 8450. Cultural Politics of Post-Colonial Education. 3 hours. Prerequisite: EFND 7100 or EFND 7110. Education as a key institutional and discursive site where cultural forms and practices are constituted, transmitted, and transformed. Major twentieth-century options for theorizing cultural politics will be applied to a study of intersections of race, class, and gender, and their relationships with power structures as manifested in educational contexts. Offered on a regular basis.

EFND 8500. Research Methods in Foundations of Education. 3 hours. Theoretical and ethical principles involved in designing and conducting foundations of education research: research question development, research document collection, literature reviews, sampling strategies, data collection. A variety of research approaches will be considered. Offered on a regular basis.

EFND 8990. Research Seminar in Social Foundations of Education. 1-3 hours.

Prerequisite: Permission of department.

Research design issues in social foundations of education. Non-Traditional Format: A combination of lecture, discussion, and team research. Offered on a regular basis.

EFND 9600. Research in Social Foundations of Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed independent research in social foundations of education. Non-Traditional Format: Directed research. Offered fall, spring, and summer semesters.

EFND 9630. Critique of Educational Literature in Social Foundations of Education. 3 hours.

Prerequisite: Permission of department.

Research and other literature in social foundations of education. Offered on a regular basis.

EFND 9700. Internship in Social Foundations of Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised internship in instruction, curriculum development, supervision, or evaluation in social foundations of education. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

Health and Human Performance

Within the School, graduate study is offered in the following areas: exercise science (MEd, EdD, PhD), health promotion and behavior (MEd, PhD), physical education (MEd, EdS, EdD, PhD), and recreation and leisure studies (MEd, EdD). Students may pursue a master's degree with the thesis option through the Master of Arts in education degree.

Exercise Science

Kirk J. Cureton, *Head*

Ted A. Baumgartner, *Graduate Coordinator, 542-4424 (Ramsey Center)*

EXRS 4200/6200-4200L/6200L. Biomechanics I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and (PHYS 1111-1111L or PHYS 1211-1211L) and permission of school; Graduate level only: Permission of school.

Mechanical principles to human movement, equipment design, and injury. Offered fall semester.

EXRS 4300/6300. Exercise Epidemiology. 3 hours.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Health-related aspects of exercise, physical activity, and physical fitness from the perspective of epidemiology. Biological mechanisms for healthy adaptations to physical activity and the behavioral determinants of exercise participation. Offered fall semester.

EXRS 4310/6310. Physical Fitness Programs. 3 hours.

Prerequisite: Permission of school.

Physical fitness programs for adults and special populations. Topics include program goals and objectives, principles and methods of physical fitness development and testing, evaluation of existing programs, and administrative and programming considerations. Offered summer semester of even-numbered years; offered fall semester of odd-numbered years.

EXRS 4320/6320. Physical Activity and Aging. 3 hours.

Prerequisite: EXRS 4630/6630-4630L/6630L and permission of school.

Biological and psychological effects of aging in relation to physical activity and exercise. Offered spring semester of odd-numbered years.

EXRS 4400/6400. Exercise and Sport Psychology. 3 hours.

Prerequisite: Undergraduate level only: PSYC 1101 and CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Effects of participating in exercise and sport on psychological traits and states. Cognitive and neurobiological mechanisms and psychological limitations to athletic performance. Offered fall semester.

EXRS 4630/6630-4630L/6630L. Exercise Physiology I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Physiological effects of human physical activity. Neuromuscular, cardiovascular, respiratory, metabolic, hormonal, and thermal responses and adaptations to exercise. Offered spring semester.

EXRS 4690/6690-4690L/6690L. Exercise Physiology II. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: EXRS 4630/6630-4630L/6630L and permission of school; Graduate level only: Permission of school.

Mechanics, energetics, and motor unit recruitment during skeletal muscle contraction; regulation of energy metabolism during exercise; mechanisms underlying oxygen delivery to muscle during exercise. Offered fall semester.

EXRS 6000. Problems in Exercise Science. 1-6 hours. Repeatable for maximum 6 hours credit. Prerequisite: Permission of school.

Independent study in exercise science. Non-Traditional Format: Variable hours established by faculty. Offered fall, spring, and summer semesters.

EXRS 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EXRS 7140. Current Problems in Exercise Science. 1-3 hours. Repeatable for maximum 6 hours credit.

Intensive study of a timely problem in exercise science. Non-Traditional Format: Variable hours established by instructor. Offered fall, spring, and summer semesters.

EXRS(HPRB)(PEDS)(RLST) 7150. Research Methods in Health and Human Performance. 3 hours.

Application of research to exercise science, health promotion and behavior, physical education, and recreation and leisure studies, with experience in developing techniques of gathering, analyzing, and reporting data. Offered fall, spring, and summer semesters.

EXRS 7160. Advanced Measurement in Exercise Science. 3 hours.

Prerequisite: Permission of school.

Current tests in exercise science; principles of test construction for physical performance, knowledge, and behavior tests; tools for evaluation of tests and the use of laboratory instruments in performance measurement. Offered spring semester of even-numbered years.

EXRS 7180. Measuring Psychological Constructs. 3 hours.

Prerequisite: Permission of school.

Scale construction and methods for assessing psychological constructs of relevance to exercise scientists, such as anxiety, body image, depression, mood, perceived exertion, personality, pain, and self-concept. Offered spring semester of even-numbered years.

EXRS 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

EXRS 7310-7310L. Adult Fitness and Cardiac Rehabilitation. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Permission of school.

Knowledge and skills required to conduct adult fitness, cardiac rehabilitation, and other clinical exercise programs. Special emphasis is placed on graded exercise testing with electrocardiogram interpretation as it relates to exercise prescription. Offered fall semester of even-numbered years; offered summer semester of odd-numbered years.

EXRS 7330-7330L. Metabolic and Cardiorespiratory Aspects of Exercise. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: Permission of school.

Metabolic and cardiovascular-respiratory responses to exercise and adaptations to training, with emphasis on applications to human physical performance and fitness. Offered fall semester.

EXRS 7340-7340L. Exercise Psychology. 3 hours. Two lectures and one 2-hour lab period.

Relation of physical activity and physical fitness to stress and mental health, explanatory models of exercise patterns, and exercise psychology assessment experiences. Offered spring semester.

EXRS 7350. Biomechanics of Human Movement. 3 hours.

Prerequisite: Permission of school.

Laws and principles of mechanics applied to human movement. Offered spring semester of odd-numbered years.

EXRS 7800. Practicum in Exercise Science. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Supervised participation in programs or research in exercise science. Non-Traditional Format: Contact hours established by supervisor. Offered fall, spring, and summer semesters.

EXRS 8200. Meta-Analysis in Health and Human Performance. 3 hours.

Prerequisite: ERSH 8310 or permission of school.

Statistical techniques for the quantitative analysis and review of a scientific literature. Meta-analytic

studies in the health and human performance literature are critiqued. Offered summer semester of odd-numbered years.

EXRS 8300-8300L. Advanced Topics in Exercise Physiology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: EXRS 7330-7330L or permission of school.

Reading, discussion, and laboratory investigation of special topics in exercise physiology. Offered spring semester.

EXRS 8310-8310L. Biochemistry of Exercise. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: EXRS 7330-7330L.

Reading, discussion, and laboratory investigation of the current topics in the biochemistry of exercise, including contractile protein energetics, mechanisms regulating chemical energy stores and substrate fluxes, and regulation of protein metabolism. Offered spring semester of odd-numbered years.

EXRS 8320. Evaluation of Human Neuromuscular Function. 2 hours. Two 2-hour lab periods.

Prerequisite: [EXRS 7330-7330L and (VPHY 6090 or PHRM 6400)] or permission of school.

Reading and laboratory experiences of the physiological basis for evaluation of human neuromuscular function as it relates to physical performance. Emphasis will be on dynamic, isometric, and isovelocity muscle actions evoked by voluntary effort or transcutaneous electrical stimulation. Offered summer semester of even-numbered years.

EXRS 8340. Seminar in Exercise Psychology. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: (EXRS 7340-7340L and PSYC 6910) or permission of school.

Reading and discussion of current topics of investigation in the psychological and behavioral aspects of exercise and health-related physical fitness. Non-Traditional Format: Variable hours established by instructor. Offered spring semester.

EXRS 8350. Methods in Biomechanics. 1-3 hours. Repeatable for maximum 7 hours credit. One lab period of 1-3 hours per week.

Prerequisite: EXRS 7350 or permission of school. Methods in human movement biomechanics, including electromyography, motion measurement, kinetic analyses, modeling, and anthropometry. Not offered on a regular basis.

EXRS 8410. Neuromuscular Mechanisms in Exercise. 3 hours.

Prerequisite: [EXRS 7330-7330L and (PHRM 6400 or VPHY 6090)] or permission of school.

Reading and discussion of current topics of investigation in the relationship between the nervous system and skeletal muscle as it pertains to exercise and training, with emphasis on neural regulation of muscle phenotype, muscle force and shortening velocity. Offered fall semester of odd-numbered years.

EXRS 8420. Oxygen Transport From Lung to Muscle During Exercise. 3 hours.

Prerequisite: [EXRS 7330-7330L and (VPHY 6090 or PHRM 6500)] or permission of school.

Reading and discussion of the mechanisms that regulate oxygen transport from the lung to muscle mitochondria at rest and during exercise. Focus will be on potential limiting factors in the transport system under different exercise stresses and the influence of training on these limiting steps. Offered fall semester of even-numbered years.

EXRS 8430. Autonomic Adjustments to Physical Stress. 3 hours.

Prerequisite: [EXRS 7330-7330L and (VPHY 6090 or PHRM 6500)] or permission of school.

Reading, discussion, and laboratory experiences of the mechanisms that regulate autonomic adjustments to physical stress. Focus will be on the afferent, central, and efferent pathways of neural reflexes engaged during exercise. Offered fall semester of odd-numbered years.

EXRS 8990. Research Seminar in Exercise Science. 1-2 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Methods and current research in exercise science. Non-Traditional Format: Variable hours established by instructor. Offered fall, spring, and summer semesters.

EXRS 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a doctoral degree under the direction of faculty. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EXRS 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of school.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

EXRS 9630. Directed Reading in Exercise Science. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of school.

Critical evaluation of reported research on a specialized topic in exercise science. Non-Traditional

Format: Expectations and contact hours established by faculty supervisor. Offered fall, spring, and summer semesters.

Health Promotion and Behavior

Stuart W. Fors, *Acting Head*
Mark G. Wilson, *Graduate Coordinator*,
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HPRB 4000/6000. Special Problems in Health Promotion and Behavior. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent study of selected topics. Non-Traditional Format: Students develop a proposal for a learning experience that is not normally available to them in a regular department course. The amount of work and/or the depth of inquiry depends on the number of credits the student desires. The proposal must be approved by the faculty member who is directing the project and by either the undergraduate or graduate coordinator. Offered on a regular basis.

HPRB 4450/6450. Occupational Safety. 3 hours.

The specific areas and the broad scope in methods, materials, and problems in occupational safety programming with special emphasis on organization and implementation of injury prevention and control techniques. Offered on a regular basis.

(HPRB)SPCM 4610/6610. Health Communication. 3 hours.

Communication about health with physicians and other providers, within support groups and health care organizations, and by public figures, groups, and organizations. Offered fall semester.

HPRB 5060/7060. Educational Strategies in Human Sexuality. 3 hours.

Theory and practice of sexuality education; basic issues, philosophy, and guiding principles; legal implications; needs, justification, and objectives; curriculum critique for school and community programs; content knowledge, resource materials; acceptable methods to approach controversial topics. Offered on a regular basis.

HPRB 5160/7160. Special Topics in Health Promotion and Behavior. 1-3 hours. Repeatable for maximum 6 hours credit.

Selected health problems or issues, with emphasis on epidemiology, etiology, and the development and evaluation of prevention measures. Non-Traditional Format: Format will generally be

lecture and discussion. Not offered on a regular basis.

HPRB 5210/7210. The Effects of Drug Use and Abuse. 3 hours.

Social, moral, psychological, and physiological causes and effects of drug use and abuse. Individual, family, and community factors related to prevention and treatment. Offered on a regular basis.

HPRB 6040. Use of Epidemiologic Data in Health Promotion and Behavior. 3 hours.

The etiology of various health problems, with focus on using this knowledge for planning preventive programs. The principles, uses, techniques, and language of epidemiology and epidemiological method. Offered on a regular basis.

HPRB 6420. Health Education in Early Childhood Education. 2 hours.

Contemporary issues and trends in curriculum and methods for Early Childhood Health Education. Emphasis is on the role of the classroom teacher in the comprehensive school health program. Offered on a regular basis.

HPRB 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

HPRB 7070. Planning and Evaluation in Health Education and Health Promotion. 3 hours.

Planning, implementation, and evaluation of health education and health promotion programs in a variety of community settings. Offered on a regular basis.

(HPRB)EXRS(PEDS)(RLST) 7150. Research Methods in Health and Human Performance. 3 hours.

Application of research to exercise science, health promotion and behavior, physical education, and recreation and leisure studies, with experience in developing techniques of gathering, analyzing, and reporting data. Offered fall, spring, and summer semesters.

HPRB 7170. Aging and Health. 3 hours.

Health promotion, risk reduction, health maintenance, and health problems of the elderly, from an individual, community, cultural, and policy perspective. Offered on a regular basis.

HPRB 7200. Women in Health and Illness. 3 hours.

Health and illness concerns of women throughout the life cycle, including the social, political, and cultural contexts of health and health care. Offered on a regular basis.

HPRB 7270. Resource Development and Program Implementation in Health Promotion and Education. 3 hours.

Prerequisite: HPRB 7070.

Managing human resources and implementing health education and health promotion programs. Offered on a regular basis.

HPRB 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

HPRB 7370. Social Marketing of Health: Theory and Process. 3 hours.

Prerequisite: HPRB 7070 or permission of department.

Social marketing theory and process applied to the marketing of health concepts, attitudes, and behaviors. Offered on a regular basis.

HPRB 7400. Worksite Health Promotion. 3 hours.

Prerequisite: HPRB 7070 or permission of department.

The interaction between human health and the work environment. The design, implementation, and evaluation of prevention and health promotion programs in business and industry. Offered on a regular basis.

HPRB 7460. Student Teaching in Health Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

In-school experience for graduate students who are completing initial teacher certification requirements in health education. Non-Traditional Format: Graduate level student teaching experience for students who do not have an undergraduate degree and certification in School Health Education. Offered on a regular basis.

HPRB 7560. Field Experience in Health Promotion and Behavior. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Practical experience in community or corporate health promotion/education through placement in an appropriate health agency, hospital, or work-site setting. Non-Traditional Format: Graduate-level field experience in community health, corporate wellness, or safety management. Required of students who do not have either an undergraduate field experience or equivalent work experience. Offered on a regular basis.

HPRB 7650. Applied Project in Health Promotion and Behavior. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Functional study of a topic that is related to the student's career objectives. Non-Traditional Format: Students propose and implement a health promotion/education project and write up the results. This is not a mini-thesis, but the "real world" application of knowledge acquired during the master's degree program. Offered on a regular basis.

HPRB 7700. Analysis and Prevention of Injury and Violence. 3 hours.

Prerequisite: (HPRB 6040 and HPRB 7070) or permission of department.

Causes and consequences of injury and violence, with emphasis on prevention research and program development. Offered on a regular basis.

HPRB 7920. Health Behavior. 3 hours.

Prerequisite: (HPRB 6040 and HPRB 7070) or permission of department.

Behavioral science theories and models used in health promotion and health education. Offered on a regular basis.

HPRB 8000. Directed Study in Health Promotion and Behavior. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Individual study under the direction of a department faculty member. Non-Traditional Format: Doctoral level independent study of an issue that applies to the student's research interests. Must be approved in advance by the faculty mentor, the major professor and the department graduate coordinator. The number of credits determines how extensive the final paper is to be. Offered on a regular basis.

HPRB 8410. Human Ecology of Health and Illness. 3 hours.

Prerequisite: Permission of department.

Major causes of premature disability and death and the relationship of health-related behavior to these problems. Challenges related to hard-to-reach populations, social isolation, economics, health policy, and lack of trust. Offered on a regular basis.

HPRB 8420. Theory and Research in Health Behavior. 3 hours.

Prerequisite: (HPRB 7920 and HPRB 8410) or permission of department.

Theoretical and conceptual foundations of health-related behavior. The development, change, and maintenance of these behaviors from a bio-behavioral perspective; needs and concerns of under-served and under-represented segments of the population. Offered on a regular basis.

HPRB 8430. Intervention and Evaluation of Health Promotion and Disease Prevention. 3 hours.

Prerequisite: (HPRB 7070 and HPRB 8420) or permission of department.

Intervention and evaluation strategies in health promotion and disease prevention at the individual, group, and community levels. Offered on a regular basis.

HPRB 8990. Research Seminar in Health Promotion and Behavior. 1-3 hours. Repeatable for maximum 5 hours credit.

Prerequisite: Permission of department.

Literature in health promotion and education, health behavior, health communications, and instructional design; research design; data analysis; and development of research proposals. Non-Traditional Format: Doctoral research seminar. Students are exposed to the latest issues and strategies as they apply to doctoral level research in Health Promotion and Behavior. Students write papers and/or make presentations based on selected readings in a specific area. Offered on a regular basis.

HPRB 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

HPRB 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

HPRB 9630. Critique of Literature in Health Promotion and Behavior. 3 hours.

Prerequisite: Permission of department.

Critical interpretation and evaluation of research and theoretical writing. Offered on a regular basis.

Physical Education and Sport Studies

P. Stanley Brassie, *Acting Head*
Michael A. Horvat, *Graduate Coordinator*
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PEDS 4300/6300-4300L/6300L. Physical Education for the Elementary School. 3 hours. Two lectures and one 2-hour lab period.

Curriculum, methods, and evaluation strategies for teaching physical activities in kindergarten through 6th grade. Students will plan lessons and teach groups of students in elementary school physical education classes. Offered fall semester.

PEDS 4330/6330-4330L/6330L. Physical Education for the Middle/Secondary School. 3 hours. Two lectures and one 2-hour lab period.

Curriculum, methods, and evaluation strategies for teaching physical activities in grades 7 through 12. Students will plan lessons and teach groups of students in both middle and high school physical education classes. Offered spring semester of odd-numbered years.

PEDS 4610/6610-4610L/6610L. Adapted Physical Education. 3 hours. Two lectures and one 3-hour lab period.

The nature, behavioral characteristics, and motor limitations of various exceptional populations with methods of preparing meaningful individualized movement experiences in an integrated, segregated, or hospital/home bound setting. Includes planning lessons and teaching individuals in a clinic setting. Offered fall semester of even-numbered years; offered spring semester of odd-numbered years.

PEDS 5050/7050. Problems of Teaching in Physical Education. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Contemporary problems and issues facing the physical education teaching profession. Non-Traditional Format: Normally a school district contacts a faculty member about being a consultant on some problem being encountered in a school. The faculty member elicits assistance from an individual student to study the problem and provide solutions. Offered fall, spring, and summer semesters.

PEDS 5140/7140. Current Problems in Physical Education and Sport Studies. 1-3 hours. Repeatable for maximum 3 hours credit.

Seminars on issues and problems in Physical Education and Sport Studies. Non-Traditional Format: Class may be lecture, a course transmitted by satellite, or a series of speakers on a topic. Offered fall, spring, and summer semesters.

PEDS 5250/7250. Women and Sport. 3 hours. Political, social, and cultural factors which have influenced the participation of women in sport and physical activity. Offered on a regular basis.

PEDS 6000. Directed Study in Physical Education and Sport Studies. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research project in physical education and sport studies. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

PEDS 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PEDS 7040. Instructional Strategies in Physical Education. 3 hours.

Instructional strategies for the purpose of improving teaching effectiveness in physical education and increasing the student's repertoire of teaching strategies. Offered fall semester.

PEDS 7060. Human Diversity in Curriculum and Instruction. 3 hours.

Theoretical and practical perspectives on diversity. Specific foci include social and cultural diversification in school institutions, and culturally responsive curriculum and pedagogy. Offered fall semester of even-numbered years.

PEDS 7070. Movement Education for the Elementary School. 3 hours.

Definition, conceptual framework and theory of movement education. Simulated and/or actual teaching situations are analyzed and a movement education program is planned for schools. Offered spring semester.

PEDS 7080. Curriculum Planning in Physical Education. 3 hours.

Problems of curriculum design and development in physical education. Offered fall semester.

PEDS 7090. Applications of Technology to Physical Education and Sport Studies. 1 hour. Repeatable for maximum 4 hours credit.

Role of technology in the instructional process in physical education. Characteristics of technological delivery systems and selection of appropriate technology to fit instructional needs. Offered fall semester.

PEDS 7100. Motor Development. 3 hours.

Development of fundamental motor skills from childhood to old age with emphasis on concomitant physiological and motor skill stages of development. Offered spring semester.

PEDS 7120. Analysis of Teaching Physical Education. 3 hours.

Process of utilizing descriptive-analytic techniques in the analysis of physical education. Emphasis on systematic observation as employed in supervision, research, and self-evaluation of teaching. Offered spring semester.

PEDS 7130. Administration of Physical Education. 3 hours.

Program planning, budgeting, care and maintenance of equipment and facilities, personnel management, and program evaluation in physical education. Offered summer semester.

(PEDS)EXRS(HPRB)(RLST) 7150. Research Methods in Health and Human Performance. 3 hours.

Application of research to exercise science, health promotion and behavior, physical education, and recreation and leisure studies, with experience in developing techniques of gathering, analyzing, and reporting data. Offered fall, spring, and summer semesters.

PEDS 7170. Motor Learning in Physical Education. 3 hours.

Psychological factors and theories of learning with special focus on learning and retention of motor skills. Offered fall semester.

PEDS 7200. Administration of Sport. 3 hours.

Past and present management trends, major management functions, personnel management, and leadership in sport organizations. Offered fall semester.

PEDS 7220. Sport and Society. 3 hours.

Sport in the American culture and its impact on society. Offered fall semester.

PEDS 7230. History of Entrepreneurship in American Sport. 3 hours.

The development of sport in a variety of cultures and how sport reflects the social, economic, political, religious, and philosophical views of a culture. Offered spring semester.

PEDS 7240. Psychosocial Aspects of Sport. 3 hours.

Psychological and sociological processes that affect the individual participating in sport. Offered summer semester.

PEDS 7260. Legal Issues in Sport Management. 3 hours.

Influence of constitutional state and federal laws on sport organizations and athletes. Offered spring semester.

PEDS 7270. Facility Design and Event Management in Sport. 3 hours.

Planning, design, financing, construction, and management of sport facilities. Planning, organizing, and evaluating the management of sporting events. Offered spring semester.

PEDS 7280. Sport Marketing. 3 hours.

Marketing of sport events and service to consumers of sport. Planning and organization of appropriate marketing strategies. Offered summer semester.

PEDS 7290. Managerial Operations in Sport. 1 hour. One 2-hour lab period.

Business and managerial operations in intercollegiate and professional sport including budget development and control, financial analysis, taxation issues, insurance considerations, and application of computers. Offered fall semester.

PEDS 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PEDS 7310. Ethics in Sport Management. 1 hour. One 2-hour lab period.

Ethical decision making in sport management. Development and application of a code of ethics for decision making in sport management. Offered fall semester.

PEDS 7320. Student Athlete in Higher Education. 1 hour. One 2-hour lab period.

Role conflict the student athlete experiences between academic responsibilities and athletic demands. Development of support programs to assist the student athlete. Offered summer semester.

PEDS 7330. Governance in Sport Organizations. 1 hour. One 2-hour lab period.

Structure of various sport organizations and how they govern and control the conduct of sport at different levels. Offered spring semester.

PEDS 7340. Technology in Sport Management. 1 hour. One 2-hour lab period.

Use of the latest technology and computer programs in sport management. Offered spring semester.

PEDS 7350. Compliance in Intercollegiate Athletics. 1 hour. One 2-hour lab period.

Issues surrounding compliance with the NCAA Rulebook with interpretation and enforcement of NCAA rules. Offered summer semester.

PEDS 7400. Practicum in Physical Education and Sport Studies. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Supervised participation in professional activities associated with physical education and sport studies. Non-Traditional Format: Graduate student is assigned to a limited work experience on campus by a faculty member. The experience is supervised on-site by a practitioner. The on-site supervisor and faculty member evaluate the student's work performance. Offered fall, spring, and summer semesters.

PEDS 7450. Internship in Sport Management. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Work experience in a sport organization under an on-site professional and supervised by a faculty member. Non-Traditional Format: Graduate student is assigned to a full-time work experience in an off-campus sport administration setting by a faculty member. The experience is supervised

on-site by a full-time professional. The on-site supervisor and faculty member evaluate the student's work performance. Offered fall, spring, and summer semesters.

PEDS 7460. Internship in Physical Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Full time work experience in physical education in a school setting under an on-site professional and supervised by a faculty member. Non-Traditional Format: Graduate student is assigned to a full-time work experience in an off-campus physical education setting by a faculty member. The experience is supervised on-site by a full-time professional. The on-site supervisor and faculty member evaluate the student's work performance. Offered fall, spring, and summer semesters.

PEDS 7610. Physical Rehabilitation of Children with Disabilities. 3 hours.

Etiology and remediation of disabilities caused by neurological, cardiorespiratory, sensory, and/or musculoskeletal and developmental anomalies as they relate to physical functioning. Responses to exercise and physical rehabilitation of children with disabilities. Not offered on a regular basis.

PEDS(RLST) 7640. Developmental and Motor Assessment. 3 hours.

Prerequisite: PEDS 4610/6610-4610L/6610L.

Assessment and interpretation techniques for evaluating physical, motor, and recreational capabilities of individuals with disabilities. Offered spring semester.

PEDS 7650. Applied Project in Physical Education and Sport Studies. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Topic or problem in physical education related to the student's professional interests. Non-Traditional Format: Master's degree student in a non-thesis track conducts a research study on a problem approved by a faculty member. The research is conducted and presented to a committee of faculty in an oral defense. Offered fall, spring, and summer semesters.

PEDS 8040. Trends in Pedagogical Research. 3 hours. Repeatable for maximum 9 hours credit.

Research design and findings in pedagogical research with implications for teaching and further research. Offered fall semester.

PEDS 8210. Bases of Motor Control. 3 hours.

A neuropsychological approach to perceptual motor processes with emphasis on the role of the nervous system in controlling sensory and motor behavior. Not offered on a regular basis.

PEDS 8630. Program Design in Adapted Physical Education. 3 hours.

Theories, concepts, and techniques for development, implementation, coordination, and evaluation of adapted physical education programs. Not offered on a regular basis.

PEDS 8990. Research Seminar in Physical Education and Sport Studies. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Seminar for doctoral students to establish foundation for dissertation writing. Non-Traditional Format: Research seminar. Offered fall, spring, and summer semesters.

PEDS 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for the doctoral degree under the direction of a faculty member. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PEDS 9080. Curriculum Inquiry in Physical Education. 3 hours.

Prerequisite: PEDS 7080.

Curriculum theorizing in physical education. Application of criteria for theory-building to curriculum model building to use in physical education settings. Not offered on a regular basis.

PEDS 9210. Advanced Study of Motor Skill Acquisition. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PEDS 7170 and PEDS 8210.

Motor learning and motor control with laboratory experiences. Not offered on a regular basis.

PEDS 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

PEDS 9600. Research in Physical Education and Sport Studies. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study of a research topic in physical education and sport studies appropriate to the advanced graduate student's specialization. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

PEDS 9630. Critique of Research Literature in Physical Education and Sport Studies. 3 hours.

Prerequisite: Permission of department.

Critical evaluation of reported research in the advanced graduate student's area of specialization

in physical education and sport studies. Offered fall, spring, and summer semesters.

PEDS 9700. Internship in Physical Education and Sport Studies. 3 hours.

Prerequisite: Permission of department.

Work experience by an advanced graduate student utilizing a research design or experimental model. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

Recreation and Leisure Studies

Douglas A. Kleiber, *Head*

Diane M. Samdahl, *Graduate Coordinator*,
542-5064

(Ramsey Center)

RLST 5130/7130. Leisure Education. 3 hours.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Principles of educating for leisure. Review of techniques for enhancing leisure awareness, leisure attitudes, decision-making skills, and resource utilization. Emphasis is on the recreation professional's facilitative role in assisting individuals and groups to achieve satisfying lifestyles. Offered spring semester.

RLST 5320/7320. Women and Leisure. 3 hours.

Prerequisite: Permission of department.

Feminist critique of leisure traditions, including women's representation in leisure theories and services. Examines leisure as a context for hegemonic relationships. Offered spring semester of even-numbered years.

RLST 5340/7340. Advanced Administrative Practices in Leisure Services. 3 hours.

Prerequisite: RLST 4870.

Techniques in budgeting and finance, personnel management, facility management, and public relations, as well as organizational theory and legislative issues. Offered fall semester.

(RLST)FORS 5400/7400-5400L/7400L. Park Management. 3 hours. Two lectures and one 2-hour lab period.

Management of public lands and open spaces, including management tools, type and nature of physical effects, visitor management principles, and site development. Use of maps, aerial photos, and compass in recreation area development. Offered spring semester.

RLST 5430/7430. Camping Administration. 3 hours.

Prerequisite: RLST 4870.

Camps with particular emphasis on program planning, selection and training of staff, campsite selection and development, health and safety, ac-

cessibility, and program evaluation. Not offered on a regular basis.

RLST 6000. Special Problems in Recreation and Leisure Studies. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Specialized study in recreation and leisure studies. May involve intensive library investigation, collection and analysis of original data, or course work on a new topic with other students. Non-Traditional Format: Student does directed reading with faculty member or group of students meet with faculty member on special topics course. Offered on a regular basis.

RLST 6020. Concepts of Leisure. 3 hours.

Leisure studies with special attention to problems in defining recreation, leisure, and play. The personal, societal, political, and environmental contexts in which leisure occurs are also examined. Offered fall semester.

RLST 6990. Research Seminar in Recreation and Leisure Studies. 2 hours. Repeatable for maximum 6 hours credit.

The philosophy and practice of basic and applied research in Recreation and Leisure Studies. Offered fall and spring semesters.

RLST 7000. Master's Research. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

(RLST)EXRS(HPRB)(PEDS) 7150. Research Methods in Health and Human Performance. 3 hours.

Application of research to exercise science, health promotion and behavior, physical education, and recreation and leisure studies, with experience in developing techniques of gathering, analyzing, and reporting data. Offered fall, spring, and summer semesters.

RLST 7290. Advanced Issues in Therapeutic Recreation. 3 hours.

Therapeutic recreation program development, design, and evaluation for persons with disabling conditions. Case studies, field trips, and volunteer experiences are utilized. Offered fall semester of odd-numbered years.

RLST 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

RLST 7380. Leisure and Aging. 3 hours.

Leisure behavior in later life with attention to programs and services for older adults in both community and institutional settings. Offered spring semester of odd-numbered years.

RLST 7500. Outdoor Recreation Resources Management. 3 hours.

Development of skills in planning, programming, management, and interpretation of outdoor recreation areas through lectures and field experiences. Offered fall semester of even-numbered years.

(RLST)PEDS 7640. Developmental and Motor Assessment. 3 hours.

Prerequisite: PEDS 4610/6610-4610L/6610L.

Assessment and interpretation techniques for evaluating physical, motor, and recreational capabilities of individuals with disabilities. Offered spring semester.

RLST 7650. Applied Project in Recreation and Leisure Studies. 1-9 hours. Repeatable for maximum 15 hours credit.

A project which addresses a problem in recreation and leisure services that is significantly related to a student's professional goals. Non-Traditional Format: Student works independently under faculty direction in doing an applied, research-based project in the field of leisure services. Offered on a regular basis.

RLST 7700. Internship in Recreation and Leisure Services. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Field placement in leisure service agency. Training in management of leisure programs and/or resources with agency and faculty supervision. Includes applied research project. Non-Traditional Format: Student works in field of leisure services under supervision of agency personnel. Offered on a regular basis.

RLST 8000. Special Problems in Recreation and Leisure Studies. 1-3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Specialized study in recreation and leisure studies. May involve intensive library investigation, collection and analysis of original data, or course work on a new topic with other students. Non-Traditional Format: Student does directed reading with faculty member or group of students meet with faculty member on special topics course. Offered on a regular basis.

RLST 8990. Doctoral Seminar in Recreation and Leisure Studies. 1 hour. Repeatable for maximum 6 hours credit.

Topics of relevance to scholarship in recreation and leisure studies in higher education. Offered fall and spring semesters.

RLST 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

RLST 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit. Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

RLST 9330. Trends in Recreation and Leisure Research. 3 hours. Trends in leisure research with attention to broader premises of scientific investigation. Offered spring semester.

RLST 9630. Critique of Literature in Recreation and Leisure Studies. 3 hours. Contemporary literature in recreation and leisure studies. Offered fall semester.

RLST 9800. Teaching in Recreation and Leisure Studies. 1-9 hours. Repeatable for maximum 18 hours credit. Prerequisite: Permission of department. Teaching in recreation and leisure studies with faculty supervision. Non-Traditional Format: Student teaches course or parts of course under faculty supervision. Offered on a regular basis.

Higher Education

Cameron L. Fincher, *Director*
 Ronald D. Simpson, *Graduate Coordinator*,
 542-3464
 (Candler Hall)

EDHI(HIST) 4900/6900. History of American Colleges and Universities. 3 hours. Prerequisite: HIST 2111 and HIST 2112. History of American colleges and universities from 1619 to the present. Student life, European antecedents, the nature of the university, the impact of religion, the rise of athletics, the culture of collegiate life, and the influence of society. Offered on a regular basis.

EDHI 7650. Applied Project in Higher Education. 2 hours. Repeatable for maximum 6 hours credit. Applied study of a topic or problem in higher education significantly related to the student's professional task. Offered on a regular basis.

EDHI 8000. History of American Higher Education. 4 hours. Development and scope of American higher education. Offered on a regular basis.

EDHI 8020. The Two-Year College. 3 hours. Purposes, policies, and programs of two-year colleges. Offered on a regular basis.

EDHI 8200. Institutional Research. 3 hours. Knowledge, skills, and competencies required to design, conduct, and interpret institutional studies in higher education. Offered fall semester.

EDHI 8300. The Law and Higher Education. 3 hours. The legal aspects of higher education through pertinent court decisions affecting the administration of the institution, faculty, staff, and students. Offered spring semester.

EDHI 8400. Finance of Higher Education. 3 hours. Financing and financial management in higher education, with particular attention to patterns of financial support and costs, tuition and financial aid, cost-effectiveness, budgeting, and financial decision making. Offered on a regular basis.

EDHI 8600. Assessment in Higher Education. 4 hours. Methods and techniques used in assessing educational outcomes in colleges and universities. Analysis and interpretation of problems, issues, and concerns involved in public demands for assessment and accountability. Offered on a regular basis.

EDHI 8890. Seminar in Higher Education. 1-3 hours. Repeatable for maximum 12 hours credit. Issues in teaching and learning in higher education. Topics are tailored to meet the needs of doctoral-level students preparing for academic posts across a variety of disciplines and instructional levels. Integrating technology in the classroom, instructional strategies, and assessing students and courses for improvement. Offered on a regular basis.

EDHI 8990. Research Seminar in Higher Education. 1-3 hours. Repeatable for maximum 3 hours credit. Proposed student research projects and methods of data analysis. Offered on a regular basis.

EDHI 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department. Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

EDHI 9010. Academic Programs in Higher Education. 3 hours.

General education and specialization in undergraduate education. Curricular trends, contemporary practices, persistent challenges, and external influences in the development of courses and programs in higher education. Offered on a regular basis.

EDHI 9020. Critical Issues in Higher Education. 3 hours. Repeatable for maximum 9 hours credit.

Critical problems and issues facing higher educational institutions, emphasizing the processes of change for improved administrative leadership and practice. Offered on a regular basis.

EDHI 9030. Instructional Processes in Higher Education. 3 hours.

Major instructional practices in higher education, including establishing course goals and objectives, selecting appropriate teaching methods, and evaluating learning outcomes. Offered on a regular basis.

EDHI 9040. Using Technology in the College Classroom. 2 hours.

Uses of technology when applied to college level instruction. Using e-mail, multi-media, distance learning, and other emerging tools to enhance student learning in higher education. Offered on a regular basis.

EDHI 9050. Organization and Governance in Higher Education. 3 hours.

Organization and governance in higher education, with special attention to the diversity of institutional types, relevant organizational theory, and the nature of change in colleges and universities. Offered on a regular basis.

EDHI 9100. The American Professoriate. 2 hours.

Nature of the American professoriate by way of historical, scholarly, popular, and contemporary perspectives. The transition of new faculty members from graduate school to the initial academic appointment. Offered on a regular basis.

EDHI 9200. Administrative Leadership in Higher Education. 4 hours.

Administrative leadership concepts, principles, and practices in United States colleges and universities. Interpretation and evaluation of theory and research in leadership, administration, and management. Offered on a regular basis.

EDHI 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 33 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

EDHI 9400. Comparative Higher Education. 2 hours.

Higher education systems and institutions outside North America. Offered on a regular basis.

EDHI 9500. Policy Studies in Higher Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Analyzing, interpreting, and evaluating selected policy issues related to the continued improvement and development of institutions, programs, and services in higher education. Policy analysis and research at public and institutional levels. Offered on a regular basis.

EDHI 9630. Critique of Educational Literature in Higher Education. 2-6 hours. Repeatable for maximum 9 hours credit.

Critical interpretation and evaluation of theory and research. Each student will make critical reviews of scholarly studies in his/her field of specialization. Non-Traditional Format: Arranged by individual and instructor; time and place by mutual agreement. Offered on a regular basis.

EDHI 9700. Internship in Higher Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Problems encountered in a work-study program applying higher education principles at a selected institution.

Non-Traditional Format: Arranged by individual, faculty, and participating institution by mutual consent. Not offered on a regular basis.

Instructional Technology

Kent L. Gustafson, *Head*
Lloyd P. Rieber, *Graduate Coordinator*,
542-3986
(Aderhold Hall)

EDIT 4170/6170. Instructional Design. 3 hours. Systematic procedures for designing, developing, evaluating, and revising instruction to meet identified goals and objectives. Offered every year on a regular basis.

EDIT 4180/6180. Instructional Development. 3 hours.

Prerequisite: EDIT 4170/6170. Developing instructional materials for a defined context applying a learner-centered, systematic design philosophy. Working within a team environment while applying contemporary learning theories. Engaging in situational assessment, learner analysis, performance specification, test

construction, strategies selection, materials design, and evaluation. Offered every year on a regular basis.

EDIT 4500/6500. Educational Television Production. 3 hours.

Design, production, and use of digital and analog video. Laboratory experiences with studio and portable cameras; editing and other equipment suitable for school use. Offered every year on a regular basis.

EDIT 6000. Special Problems in Instructional Technology. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study of selected problems in instructional technology. Non-Traditional Format: Students work independently on selected problems. There is no regularly scheduled class time. Offered every year on a regular basis.

EDIT 6100. Introduction to Instructional Technology. 3 hours.

The field of instructional technology, situating the field within the context of its historical perspective, current practices, and future directions. Offered every year on a regular basis.

EDIT 6150. Introduction to Computer-Based Education. 3 hours.

The computer and its educational applications. Computer-based education in the areas of instruction, text and data processing, multimedia, and telecommunications. Philosophical perspectives on the role of computer technology in education. Offered every year on a regular basis.

EDIT 6200. Learning Environments Design I. 3 hours.

Prerequisite: EDIT 4170/6170.

Instructional design, learning theory, project management, and evaluation of designing interactive learning environments for education and training. Students and faculty work in teams to produce interactive multimedia, electronic performance support systems, internet resources, and other evolving forms of technology-enhanced learning environments. Offered every year on a regular basis.

EDIT 6210. Learning Environments Design II. 3 hours.

Prerequisite: EDIT 6200.

Contemporary learning theories of the design of interactive environments for information retrieval, learning, and performance support. Students and faculty work in teams to produce hypertext, hypermedia, microworlds, simulations, games, virtual learning environments, and other examples of interactive environments. Offered every year on a regular basis.

EDIT 6220. Design and Development Tools. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Students learn a variety of tools appropriate for computer-based development. These include graphics, media, and software development tools. Students are required to write a contract for the specific tools to be learned. Non-Traditional Format: Students work independently learning computer-based tools. There is no regularly scheduled class time. Offered every year on a regular basis.

EDIT 6300. Administration of Media Programs. 3 hours.

Management of resources, services, and functions of the school media program. Students develop a vision and plan for improving collections, technical services, and promotion activities. Offered every year on a regular basis.

EDIT 6320. Information Technology. 3 hours.

Effective utilization, integration, and management of technology tools within the curriculum, with emphasis on planning, needs assessment, and organizational structure. Offered every year on a regular basis.

EDIT 6340. Information Services in School Media Programs. 3 hours.

Students analyze criteria for planning, selecting, using, and evaluating a variety of electronic and print resources for information services in schools. Offered every year on a regular basis.

EDIT 6360. Information Literacy in the School Media Program. 3 hours.

School media specialist's role in collaborative planning partnerships with classroom teachers, integration of information literacy skills within the curriculum, and strategies for teaching information literacy. Offered every year on a regular basis.

EDIT 6400. Emerging Approaches in Teaching, Learning, and Technology. 3 hours.

Teaching, learning, and performing, and the ways technological environments can be designed to support these approaches. Describes the theoretical and research foundations of these approaches, and demonstrates varied uses of technology. Offered every year on a regular basis.

EDIT 6900. Research Methods in Instructional Technology. 3 hours.

Locating and interpreting information from published reports, planning and conducting research and evaluation studies, and using research and evaluation procedures to explore questions related to instructional technology. Offered every year on a regular basis.

EDIT 7000. Master's Research. 1-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

EDIT 7230. Educational Applications of Computer Graphics. 3 hours.

Prerequisite: EDIT 6150 and EDIT 6220.

Static and animated computer graphics for educational settings including use of multiple visual representations in interactive learning environments. Strong focus on theory and research. Offered every year on a regular basis.

EDIT 7320. Research in School Media Services. 3 hours.

Prerequisite: EDIT 6300 and EDIT 6900.

Identifies contemporary problems in the field of school media services around which students design appropriate research studies. Offered every year on a regular basis.

EDIT 7340. Issues in School Media Programs. 3 hours.

Prerequisite: EDIT 6300 and EDIT 6320 and EDIT 6340 and EDIT 6360.

Explores contemporary trends, problem areas, and issues in management of school media programs through literature investigations, seminar discussions, and case studies. Offered every year on a regular basis.

EDIT 7460. Internship in Instructional Technology. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

On-site experiences under supervision of qualified persons in the field. Students maintain and submit a log, journal, or other documentation of their experience. Non-Traditional Format: Students are assigned to off-campus locations for internships under the supervision of qualified individuals. There is no regularly scheduled class time. Offered every year on a regular basis.

EDIT 7500. Technology-Enhanced Classroom Environments. 3 hours.

Design and creation of technology-enhanced classroom environments. Examines role of current and emerging technologies in the classroom. Offered every year on a regular basis.

EDIT 7520. Distance Learning and Telecommunications. 3 hours.

Distance learning and telecommunications in the United States and the world, covering history, research, technology, uses, and policy issues; development of appropriate educational applications. Offered every year on a regular basis.

EDIT 7550. Management of Instructional Technology Projects. 3 hours.

Planning, organizing, supervision, and evaluation of technology-based education and training pro-

jects and support services in a variety of settings. Offered every year on a regular basis.

EDIT 7650. Applied Research Project in Instructional Technology. 3 hours.

Prerequisite: Permission of department.

Culminating activity leading to the Specialist Degree. Student applies skills, knowledge, and appropriate research methods to identify and solve real world professional problems. Non-Traditional Format: Specialist students work independently to identify and solve real world problems. There is no regularly scheduled class time. Offered every year on a regular basis.

EDIT 8150. Instructional Message Design. 3 hours.

Prerequisite: EDIT 6210.

Application of message design principles to the creation of instructional messages in the materials for various media. Motivation, memory, perception, attitude changes, and concept learning principles are integrated into practical exercises. Offered every year on a regular basis.

EDIT(EADU) 8200. Theory and Practice of Educational Change. 3 hours.

Individual and collective meanings of change, theory, and practice of organizational change and development in a variety of educational settings. Offered every year on a regular basis.

EDIT 8350. Instructional Product Evaluation. 3 hours.

Prerequisite: EDIT 4170/6170 and (ERSH 6300 or STAT 6210).

Planning, conducting, analyzing, and reporting systematic evaluations of instructional products such as computer-based training, interactive multimedia, and distance learning. Offered every year on a regular basis.

EDIT 8990. Doctoral Seminar. 1 hour. Repeatable for maximum 4 hours credit.

Developmental forum for establishing, clarifying, and evolving student's perspectives on instructional technology research. Heighten awareness of critical issues in the field and areas of disciplined inquiry. Offered every year on a regular basis.

EDIT 9000. Doctoral Research. 1-6 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

EDIT 9300. Doctoral Dissertation. 1-6 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Inde-

pendent research and preparation of the doctoral dissertation. Offered every year on a regular basis.

EDIT 9600. Educational Research in Instructional Technology. 1-6 hours. Repeatable for maximum 12 hours credit.

Individual research under the supervision of a faculty member. Non-Traditional Format: Doctoral students work independently on individual research problems under the direction of a faculty member. There is no regularly scheduled class time. Offered every year on a regular basis.

EDIT 9630. Critique of Literature in Instructional Technology. 3 hours.

Research and theoretical literature in instructional technology. Review and evaluation of current research in selected areas is emphasized. A synthesis of the literature in an area of interest is completed by each student. Offered every year on a regular basis.

EDIT 9990. Doctoral Topical Seminar. 3 hours. Repeatable for maximum 12 hours credit.

Examination of topical issues in instructional technology. Offered every year on a regular basis.

Language Education

Joel A. Taxel, *Head*

Linda C. DeGroff, *Graduate Coordinator*,
542-4511
(Aderhold Hall)

ELAN 4080/6080. Special Problems in Language Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected topics related to teaching language arts or a foreign language. Non-Traditional Format: Independent study with faculty member. Not offered on a regular basis.

ELAN 4400/6400. Teaching as Planning in Context. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470 or ELAN 4470/6470.

Historical, political, economic, and social factors that influence how the language arts are taught, how schools operate, and how teachers function. Not offered on a regular basis.

ELAN 4401/6401. Teaching as Collaborative Inquiry. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461.

Corequisite: ELAN 4400/6400 or ELAN 4410/6410 or ELAN 4470/6470 or ELAN 4470/6470.

Literacy research for practitioners including research design, methodology, data analysis and interpretation for questions about students as readers/writers/language users. Offered fall semester.

ELAN 4410/6410. Adolescent Literature. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4470/6470 or ELAN 4470/6470.

Adolescent literature and its selection and use in the middle school and high school to promote engagement with literature and as a bridge to the classics. Offered fall semester.

ELAN 4460/6460. Supervised Field Experience in English, Grades 7-12. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461 or permission of department.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Observation and work in public school English classrooms. Offered fall semester.

ELAN 4462/6462. Student Teaching Seminar. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461 or ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470 or ELAN 4470/6470.

Corequisite: ELAN 5460.

Issues of classroom teaching. Students plan for and examine their concurrent student teaching experience in light of research and theory, peers' experiences in other school settings, and their own teaching and learning histories. Non-Traditional Format: Intensive two-week planning seminar prior to student teaching and two-week debriefing seminar following student teaching. Ten weeks of two-hour weekly discussions concurrent with student teaching. Offered spring semester.

ELAN 4470/6470. Guided Field Research. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Supervised observation and participation in school settings. Offered fall semester.

ELAN 4630/6630. TESOL Methods and Materials. 3 hours.

Principles, methods, materials, and activities for the teaching of English to adult speakers of other languages. Offered every year on a regular basis.

ELAN 5312/7312. Poetry in Elementary and Middle School Classrooms. 3 hours.

Poems and enrichment activities for use in elementary and middle school classes; ways of encouraging children to respond to published

poetry, to understand poetic devices, and to write poetry. Offered spring semester of even-numbered years; offered summer semester of odd-numbered years.

ELAN 5314/7314. Informational Literature in Elementary and Middle Schools. 3 hours.

Reading of informational literature and examining selection criteria and ways to integrate informational books into language arts and content area curricula appropriate for preschool through 8th grade. Offered every year on a regular basis.

ELAN 5318/7318. Culturally Diverse Children's Literature. 3 hours.

Prerequisite: Undergraduate level only: ELAN 5210; Graduate level only: ELAN 6310 or ELAN 7310.

Children's fiction, poetry, and nonfiction literature dealing with the experiences of diverse cultures comprising American society. Development of criteria for evaluation and strategies for incorporating literature into the curriculum. Offered every year on a regular basis.

ELAN 5332/7332. Drama in Elementary and Middle Grade Classrooms. 3 hours.

Integrating drama across the curriculum, including improvisational process drama, connecting to issues associated with children's literature, reading, writing, storytelling, and thematic oriented units of study with students in grades prekindergarten to middle school. Offered summer semester.

ELAN 5390/7390. Problems of Literacy Teaching and Learning. 3 hours.

Issues related to preschool through 8th grade readers and writers with diverse learning paths, including learning disabilities, English as a second language, and histories of school failure. Effective teaching strategies include culturally-responsive teaching, student-generated curriculum and assessment links, interdisciplinary connections, and family involvement. Not offered on a regular basis.

ELAN 5730/7730. First and Second Language Acquisition and Development. 3 hours.

Native and second language acquisition processes, with attention to regional, social, and functional variation in language and contrasts between English and other selected languages. Offered fall and summer semesters.

ELAN 6100. Whole Language Teaching in Early Childhood Education. 3 hours.

Research and theory on oral and written language acquisition, development, and variation and the implications for classroom practices. Whole language instructional techniques for the development of written and oral language. Offered summer semester.

ELAN 6310. Survey of Children's Literature, Preschool Through 8th Grade. 3 hours.

Prerequisite: Permission of department.
Literature appropriate for children, preschool through middle school. Offered every year on a regular basis.

ELAN 6631. Teaching Language-Minority Students. 3 hours.

Pedagogical theories and practices pertaining to non-native speakers of English in the American school system. Offered every year on a regular basis.

ELAN 7000. Master's Research. 1-6 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.
Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ELAN 7016. Folk Literature in the Curriculum. 3 hours.

Genres of folk literature, their relationship to formal literature, and their role in contemporary society. A study of culture through folklore. Offered spring semester.

ELAN 7070. Research Methods in Language Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Research methods appropriate for studying language teaching and learning. Not offered on a regular basis.

ELAN 7300. Master's Thesis. 1-6 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of department.
Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ELAN 7310. Children's Literature in the Curriculum, Preschool Through 8th Grade. 3 hours.

Prerequisite: Permission of department.
Role of children's literature in the curriculum, including principles and techniques in selection of books and implementation of literature-based curriculum. Offered fall and summer semesters.

ELAN 7320. Teaching Composition in the Elementary and Middle School. 3 hours.

Strategies for building literate classroom communities based on current theory and research. Not offered on a regular basis.

ELAN 7330. The Oral Tradition. 3 hours.

Prerequisite: ELAN 3110 or ELAN 5210 or ELAN 6310.

The role of storyteller in preliterate and literate cultures, and practice in the arts of poetic recitation, choral reading, and storytelling as they re-

late to the primary and middle school grades. Offered summer semester.

ELAN 7400. Current Issues in English Education. 3 hours.

Based on their own experiences in schools, students will identify issues of language and literacy that present challenges and potential in an increasingly diverse culture. Offered fall semester.

ELAN 7408. Master's Seminar in English Education. 3 hours.

Prerequisite: ELAN 7400.

Critical issues in the teaching of English based on student input as teachers. Offered summer semester.

ELAN 7410. Guiding the Reading of Young Adults. 3 hours.

The needs and concerns of young adults as readers of imaginative literature and theoretical foundations of a successful program for literature instruction. Offered summer semester.

ELAN 7420. Critical Pedagogy in Composition Studies. 3 hours.

Prerequisite: ELAN 7400.

Theoretical implications of traditional, critical, and deconstructive pedagogies of writing and their usefulness in the classroom. Offered spring semester.

ELAN 7430. Critical Pedagogy in English Education. 3 hours.

Prerequisite: ELAN 7400.

Linguistic diversity, the varieties of English, English as a second language, and exploring the power of language as a cultural and political tool. Offered summer semester.

ELAN 7500. Curriculum Planning in Foreign Language Education. 3 hours.

Prerequisite: Permission of department.

Historical, philosophical, and sociological bases for curriculum planning in foreign languages; survey of current trends in design and content. Offered spring semester.

ELAN 7600. Reading and Writing in a Non-Native Language. 3 hours.

Linguistic, cognitive, and social dimensions of reading and writing in a non-native language. Offered every year on a regular basis.

ELAN 7700. Creating Literate Communities. 3 hours.

Prerequisite: ELAN 7400.

How literate communities develop, how group members talk about texts, and how they negotiate roles within groups of readers. Offered spring semester.

ELAN 7731. Advanced Topics in First and Second Language Acquisition. 3 hours.

Research and theories on first and second lan-

guage acquisition and development. Offered on a regular basis.

ELAN 7732. Sociocultural Aspects of Language Learning and Teaching. 3 hours.

Theories and practices underlying a sociocultural perspective on language teaching and learning. Offered every year on a regular basis.

ELAN 7970. Applied Project in Language Education. 3 hours.

Prerequisite: Permission of department.

Intensive study of a selected topic through library research and/or collection of original data. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

ELAN 8000. Research Seminar in Language Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Critiques of published research and reports of original research conducted by faculty members and doctoral students. Offered fall semester.

ELAN 8010. Theory and Research in Reader Response to Literature in Schools. 3 hours.

Prerequisite: ELAN 7310 or ELAN 7410.

Theories of Rosenblatt, Iser, Bakhtin, and others. Research in how readers create meaning from literature in elementary, secondary, and college classrooms. Offered fall semester of odd-numbered years.

ELAN 8020. Research Seminar on Composing Processes. 3 hours.

Research on the composing processes, including developmental rhetoric, speaking and writing relationships, thought processes involved in composing, qualitative research methodology, and implications of research for curriculum and instruction in writing. Not offered on a regular basis.

ELAN 8030. Classroom Discourse in Language Teaching and Learning. 3 hours.

Recent research and theories on the pedagogical role of discourse in first and second language classrooms. Offered every year on a regular basis.

ELAN 8032. Seminar on Thought and Language. 3 hours.

Theories of the relation between thought and language, with emphasis on the works of Vygotsky and educational theorists and researchers working from a Vygotskian frame. Explores pedagogical implications for literacy, literature, and language learning. Not offered on a regular basis.

ELAN 8040. Languages, Cultures, and Literacies. 3 hours.

Theory and research on literacy and its relationship to culture, social process, and identity. Offered every year on a regular basis.

ELAN 8070. Representing Qualitative Research.

3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ERSH 8410 or ERSH 8420.

Theoretical, ethical, and practical issues involved in transforming qualitative data into a written research report. Students, both in dissertation and pre-dissertation, will write representations of data they have already collected. Not offered on a regular basis.

ELAN 8310. Women and Minorities in Literature for Young People. 3 hours.

Prerequisite: ELAN 6310 or ELAN 7310 or permission of department.

Historical evolution of representations of women and racial minorities in children's literature. Theory and research exploring the relation between children's literature and changing sociocultural and political values and ideologies provide the framework for the course. The relation between sociocultural and political values and more traditional aesthetic considerations. Offered spring semester of even-numbered years.

ELAN 8400. Assessment and Evaluation in English Education. 3 hours.

Philosophical stances underlying various purposes and practices for assessing and evaluating student and teacher performance and progress in secondary language arts programs. Examines issues from a historical perspective. Not offered on a regular basis.

ELAN 8410. Seminar in Secondary School Literature. 3 hours.

Recent trends in literature curriculum development in secondary schools; critical examination of issues related to literature curriculum development with special attention to theories of reading and of young adult literature. Offered every year on a regular basis.

ELAN 8600. Research on Second Language Acquisition in the Classroom. 3 hours.

Research and theories on the acquisition of other languages in classroom settings. Offered every year on a regular basis.

ELAN 8730. Advanced English Language Studies for Teachers. 3 hours.

Scholarship in the teaching of English language; theory and research-based critiques of English language teaching methods and policies; classroom discourse studies; and language variation in educational settings. Not offered on a regular basis.

ELAN 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

ELAN 9020. Independent Study in Language Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed readings in research related to language teaching and learning. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

ELAN 9040. Review of Research in Language Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Review of research on the theory and research of language and literacy. Non-Traditional Format: Independent research. Offered fall and spring semesters.

ELAN 9060. Special Topics in Language Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Selected topics related to the theory and research of language and literacy. Non-Traditional Format: Independent research. Offered fall and spring semesters.

ELAN 9080. Critique of Theory and Research in Language Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Survey of research related to language teaching and learning. Non-Traditional Format: Independent research under the direction of faculty members. Offered fall, spring, and summer semesters.

ELAN 9100. Doctoral Examinations and Prospectus Preparation. 1-6 hours. Repeatable for maximum 6 hours credit.

Written and oral comprehensive examinations and development of dissertation prospectus. Non-Traditional Format: Doctoral exams and prospectus preparation. Offered fall and spring semesters.

ELAN 9300. Doctoral Dissertation. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Mathematics Education

Larry L. Hatfield, *Head*

Thomas J. Cooney, *Graduate Coordinator*,
542-4194
(Aderhold Hall)

EMAT 4000/6000. Special Problems in Mathematics Education. 1-6 hours. Repeatable for maximum 9 hours credit.

Topics in mathematics education. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

EMAT 4200/6200. Technology in Teaching Elementary School Mathematics. 3 hours.

Prerequisite: Permission of department.

Use of technological tools in teaching elementary mathematics. Current computer software for mathematical explorations. Offered summer semester of even-numbered years; offered spring semester of odd-numbered years.

EMAT 4360/6360. Teaching and Learning Secondary School Mathematics. 3 hours.

Prerequisite: EMAT 4680/6680 and permission of department.

Corequisite: EMAT 5360/7360.

Instructional strategies, classroom management, assessment techniques, lesson planning, multicultural and gender issues in mathematics education. Offered fall and spring semesters.

EMAT 4500/6500. Connections in Secondary School Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210-2210L)] or permission of department.

The secondary mathematics curriculum, with attention to applications of mathematics and to connections within mathematics and between mathematics and other subjects. Offered fall and spring semesters.

EMAT 4550/6550. Contemporary School Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210-2210L)] or permission of department.

The contemporary secondary and collegiate mathematics curriculum, with an emphasis on data handling, modeling, infinite processes, stochastic processes, and discrete mathematics. Offered summer semester of even-numbered years; offered fall and spring semester of odd-numbered years.

EMAT 4600/6600. Problem Solving in Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210-2210L)] or permission of department.

Mathematical problems with emphasis on exploring various mathematical contexts, on posing and extending problems, and on communicating mathematical problems and solutions. Offered fall and spring semesters of even-numbered years; offered summer semester of odd-numbered years.

EMAT 4650/6650. Historical and Cultural Foundations of Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210-2210L)] or permission of department.

Development of mathematics across time, geography, and cultures with attention to the content of school mathematics. Offered spring and summer semesters of even-numbered years; offered spring semester of odd-numbered years.

EMAT 4680/6680. Technology and Secondary School Mathematics. 3 hours.

Prerequisite: MATH 2210-2210L.

Mathematical investigations appropriate to the secondary school using various technology tools. Offered fall and spring semesters of even-numbered years; offered fall, spring and summer semesters of odd-numbered years.

EMAT 4690/6690. Technology Enhanced Instruction in Secondary School Mathematics. 3 hours.

Prerequisite: MATH 2210-2210L.

Use of technology in mathematics instruction and development of materials for mathematics instruction enhanced by technology. Offered fall and summer semesters of even-numbered years; offered fall semester of odd-numbered years.

EMAT 4700/6700. Advanced Explorations with Technology in Mathematics Instruction. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 2210-2210L.

Use of technology in mathematics instruction, with an emphasis on the organization of materials for secondary mathematics courses. Offered spring semester of odd-numbered years.

EMAT 4950/6950. Professional Seminar in Teaching Mathematics. 3 hours.

Prerequisite: EMAT 4360/6360.

Corequisite: EMAT 5460/7460.

Issues identified from the student teaching experience in mathematics with consideration of various avenues for professional development. Offered fall and spring semesters.

EMAT 5280/7280. Teaching Number Systems in the Middle School. 3 hours.

Prerequisite: MATH 2200 -2200L and permission of department.

Corequisite: MATH 5020/7020.

Didactics of number systems for middle school mathematics. Teaching methods, curriculum ma-

terials, psychological factors for developing natural, integer, rational, and real number structures. Evaluation through the examination of mathematics content, with emphasis on the mathematical operations, models, and problem solving. Offered fall semester.

EMAT 5290/7290. Teaching Geometry and Measurement in the Middle School. 3 hours.

Prerequisite: EMAT 5280/7280.

Corequisite: MATH 5030/7030.

Didactics of geometry for middle school mathematics. Teaching methods, curriculum materials, psychological factors for developing geometric and measurement concepts. Evaluation through the examination of mathematics content, with emphasis on statistics, probability, and mathematical applications. Offered spring semester.

EMAT 5310/7310. Teaching Mathematics in the Middle School. 3 hours.

Prerequisite: EMAT 5290/7290.

Methods and materials for teaching mathematics in the middle school, with emphasis on integration of mathematical topics. Offered fall semester.

EMAT 5320/7320. Teaching Algebra in the Middle School. 3 hours.

Prerequisite: EMAT 5290/7290.

Didactics of algebra and number theory for middle school mathematics. Teaching methods, curriculum materials, psychological factors for developing algebraic concepts. Offered fall semester.

EMAT 5360/7360. Secondary School Mathematics Field Experience. 3 hours.

Prerequisite: EMAT 4680/6680 and permission of department.

Corequisite: EMAT 4360/6360.

Supervised observations, interviews, tutoring, teaching practice, and professional goal development. Non-Traditional Format: Forty-five hours of field work per semester. Offered fall and spring semesters.

EMAT 5460/7460. Student Teaching in Secondary School Mathematics. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: EMAT 4360/6360.

Corequisite: EMAT 4950/6950.

Supervised mathematics teaching in a secondary school. Non-Traditional Format: In school for ten weeks, all day. Offered spring semester.

EMAT 6410. Mathematical Learning in PreK-Grade 5. 3 hours.

Learning theories and their application to mathematics teaching and learning. Offered fall and summer semesters of odd-numbered years.

EMAT 6420. Mathematics Methods for Early Childhood Education. 3 hours.

Content, methods, and materials appropriate for preK through 5th grade mathematics instruction.

Integration of instruction and assessment and appropriate use of technology. Offered fall and summer semesters of even-numbered years.

EMAT 6990. Research Seminar in Mathematics Education. 1-6 hours. Repeatable for maximum 9 hours credit.

Topics in mathematics education from a research perspective. Offered fall, spring, and summer semesters.

EMAT 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EMAT 7010. Teaching Mathematics in the Elementary School. 3 hours. Repeatable for maximum 6 hours credit.

Interrelationships between contemporary mathematics content for elementary schools, effective mathematical communication with children, and learning theory. Not offered on a regular basis.

EMAT 7050. Teaching Secondary School Mathematics. 3 hours.

Prerequisite: Permission of department.

Instructional procedures and evaluation in terms of student growth. Offered on a regular basis.

EMAT 7070. Mathematics Curriculum in the Elementary School. 3 hours. Repeatable for maximum 6 hours credit.

Elementary school mathematics curriculum with special emphasis on contemporary programs, issues, and trends. Not offered on a regular basis.

EMAT 7080. Curriculum in Mathematics Education. 3 hours.

Prerequisite: Permission of department.

Mathematics curriculum of the secondary schools, with emphasis on current issues and trends. Offered summer semester of even-numbered years; offered fall semester of odd-numbered years.

EMAT 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

EMAT 7650. Applied Project in Mathematics Education. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A mathematics education topic or problem under the direction of a faculty member. Non-Traditional Format: This course is based on the development and conduct of an individual project resulting in

less need for faculty contact. Offered fall, spring, and summer semesters.

EMAT 8010. Advanced Study of Mathematics Curriculum. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: (EMAT 7050 and EMAT 7080) or permission of department.

Theoretical bases for mathematics curriculum. Offered fall semester.

EMAT 8020. Advanced Study of Mathematics Teaching and Teacher Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: (EMAT 7050 and EMAT 7080) or permission of department.

Theoretical bases for mathematics teaching and teacher education. Offered spring semester.

EMAT 8030. Advanced Study of Mathematics Learning. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: (EMAT 7050 and EMAT 7080) or permission of department.

Theoretical bases for mathematics learning. Offered summer semester.

EMAT 8990. Research Seminar in Mathematics Education. 1-6 hours. Repeatable for maximum 12 hours credit. One 1-hour lab period.

Prerequisite: Permission of department.

Seminar for doctoral students on contemporary issues in mathematics education. Non-Traditional Format: Independent study and/or research will be required if the number of credit hours exceeds the number of hours of discussion. Offered fall, spring, and summer semesters.

EMAT 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EMAT 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall and spring semesters.

EMAT 9600. Educational Research in Mathematics Education. 1-9 hours. Repeatable for maximum 9 hours credit. One 1-hour lab period.

Prerequisite: Permission of department.

Independent research on a problem in mathematics education. Non-Traditional Format: Supervised independent research. Offered fall, spring, and summer semesters.

EMAT 9630. Critique of Literature in Mathematics Education. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Critical interpretation and evaluation of research and theoretical writing in mathematics education. Offered fall semester.

EMAT 9640. Analysis and Critique of Research in Mathematics Education. 3 hours. Repeatable for maximum 9 hours credit. Three 1-hour lab periods.

Prerequisite: Permission of department.

Analysis and evaluation of research in mathematics education. Offered spring semester.

EMAT 9700. Internship in Mathematics Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised work in mathematics education in an instructional situation. Non-Traditional Format: Supervised independent study. Offered fall and spring semesters.

EMAT 9800. Practicum in Mathematics Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Completion of a supervised project in mathematics education. Non-Traditional Format: Supervised independent study. Offered fall and spring semesters.

Music Education

Donald R. Lowe, *Graduate Coordinator*,
542-2743
(*Music Building*)

EMUS 6000. Special Problems in Music Education. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Individual research projects involving library investigation or the collection and analysis of original data pertinent to a given problem. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

EMUS 7460. Internship in Music Education. 1-13 hours. Repeatable for maximum 13 hours credit.

Prerequisite: Permission of department.

Professional seminar and supervised teaching in the public schools. Non-Traditional Format: Three weeks of seminar and twelve weeks of supervised teaching. Offered fall and spring semesters.

EMUS 7650. Applied Project in Music Education. 3 hours.

Prerequisite: Permission of department.

Topic or problem in music education significantly related to the student's professional needs. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

EMUS 8220. Philosophy, History, and Practice of Music Education. 3 hours.

National and international philosophical thought and practice in music education; history of music. Not offered on a regular basis.

EMUS 8990. Research Seminar in Music Education. 1-3 hours. Repeatable for maximum 6 hours credit.

Music education research topics and reports. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall and spring semesters.

EMUS 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 40 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EMUS 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 33 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

EMUS 9630. Critique of Literature in Music Education. 3 hours.

Fundamental sources, databases, and techniques used in conducting library research; analysis of broad spectrum of the professional literature in music education, with emphasis on critical reviews of standard references and current literature. Offered spring semester.

Occupational Studies

Helen C. Hall, *Head*

Robert C. Wicklein, *Graduate Coordinator,*

542-1682

(River's Crossing)

Agricultural Education

EAGR 4010/6010. Agricultural Education Leadership Seminar. 1 hour. Repeatable for maximum 5 hours credit. One 1-hour lab period.

Current problems in teaching agricultural education and training in specialized areas relevant to the needs of future teachers of agricultural education. Non-Traditional Format: Involvement in off-campus Agricultural Education/FFA activities will also be required in order to succeed in the class. Offered fall and spring semesters.

EAGR 4340/6340. Developing Community Programs in Agriculture. 3 hours.

Developing the components of high school agriculture education programs, including collection and use of demographic data to design and implement community based programs. Offered spring semester.

EAGR 4350/6350. Curriculum Planning in Agricultural Education. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for agricultural education. Offered fall semester.

EAGR 4360/6360. Instructional Strategies in Agricultural Education. 3 hours.

Study and evaluation of teaching materials, methods, techniques, and strategies utilized in agricultural education. Offered fall semester.

EAGR 7020. Methods of Instruction in Agricultural Education. 3 hours.

Instructional procedures, materials, and evaluation techniques in agricultural education. Not offered on a regular basis.

EAGR 7450. Internship in Agricultural Business/Industry. 1-3 hours. Repeatable for maximum 6 hours credit.

Internship in an agricultural business for experienced educators. Non-Traditional Format: Supervised occupational experience in business and industry. Offered fall, spring, and summer semesters.

EAGR 7460. Internship in Agricultural Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Selected problems confronting a beginning teacher, with emphasis upon program planning, class preparation, instructional strategies, and evaluation techniques. Non-Traditional Format: Supervised full-time experience in school setting. Offered fall and spring semesters.

EAGR 7650. Applied Project in Agricultural Education. 3 hours.

Prerequisite: ERSB 4200/6200.

Topic or problem in agricultural education significantly related to the student's professional responsibility. Non-Traditional Format: Independent study completed under direction of a faculty member. Offered fall, spring, and summer semesters.

Business Education

EBUS 4010/6010. Business Communication. 3 hours.

Theory and practice of thinking, reading, writing, speaking, and listening processes involved in business education. Offered fall semester.

EBUS 4020/6020. Computer Concepts and Operating Systems for Occupational Studies. 3 hours.

Computer hardware and software operating procedures, data organization and representation. Current trends in occupational uses of computer technology and instructional approaches for teaching operating systems. Offered fall and spring semesters.

EBUS 5030/7030. Word Processing Applications. 3 hours.

Prerequisite: Permission of department.

Word processing with popular software packages. Focus is on advanced features of word processing packages, including merging, sorting, mathematical functions, and desktop publishing and instructional approaches for teaching word processing in occupational studies. Offered on a regular basis.

EBUS 5060/7060. Desktop Publishing in Occupational Studies. 3 hours.

Computer applications for electronic publishing, including elements of page design, effective publications, presentations, instructional materials, and instructional approaches for teaching desktop publishing in occupational studies. Offered spring semester.

EBUS 5070/7070. Office Management. 3 hours.

Office management, including practices, supervision, information management, methods and procedures, job organization, evaluation, selection, and training of office personnel. Offered spring semester.

EBUS 5090/7090. Spreadsheet and Presentation Applications in Occupational Studies. 3 hours.

Prerequisite: Permission of department.

Spreadsheet and presentation software, including spreadsheet commands, graphs, data sorting, querying, and macro design and presentation software commands, design, sequencing and practice demonstration. Instructional approaches for teaching spreadsheets and presentation soft-

ware in occupational studies. Offered fall and spring semesters.

EBUS 5100/7100. Systems Analysis and Design for Occupational Studies. 3 hours.

Prerequisite: (EBUS 5090/7090 and CSCI 5330/7330) or permission of department.

Technical background and knowledge for teaching information systems development and implementation in occupational studies. Instructional strategies for project management, documentation standards, hardware and software considerations, systems design, and program languages. Offered fall and spring semesters.

EBUS 5760/7760. Consumer Financial Planning. 3 hours.

Prerequisite: ECON 2105.

Consumer problems encountered during and after school years. How the economy functions, wise purchase decisions, managing money, evaluating sales and advertising practices, and guarding against unwise buying practices. Instructional approaches for teaching financial planning in occupational studies. Offered fall semester.

EBUS 7010. Instructional Strategies for Information Processing. 3 hours.

Prerequisite: EBUS 5030/7030.

Teaching theory and principles of skill building, materials development, and evaluation relating to teaching of keyboarding, word processing, and machine or manual transcription. Offered summer semester of even-numbered years.

EBUS 7020. Instructional Strategies for Basic Business Education. 3 hours.

Organization, standards, evaluation, textbooks, materials, special teaching techniques, motivation, individual differences in the teaching of basic business courses. Offered summer semester of odd-numbered years.

Home Economics Education

EHEC 7460. Internship in Teaching Home Economics Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Teaching internship in a home economics education program under the supervision of a classroom home economics teacher and a member of occupational studies faculty. Non-Traditional Format: Supervised full-time experience in school setting. Offered fall and spring semesters.

EHEC 7600. Nutrition Education. 3 hours.

Current trends in nutrition education; emphasis on the development of a nutrition education program for a local community setting. Offered fall semester of even-numbered years.

EHEC 7650. Applied Project in Home Economics Education. 3 hours.

Project written in acceptable thesis format involving library investigation and original data collection pertinent to a chosen problem related to the student's professional task. Non-Traditional Format: Independent study completed under direction of a faculty member. Offered fall, spring, and summer semesters.

Marketing Education

EMKT 4100/6100. Economic Foundations for Work-Based Education. 3 hours.

Prerequisite: EOCS 3010.

Economic principles and concepts of free-market economies in work-based education programs, with emphasis on instructional approaches. Offered fall semester.

EMKT 4110/6110. Marketing and Business Foundations of Work-Based Education. 3 hours.

Prerequisite: EOCS 3010.

Business and marketing concepts, business environments, and managerial systems in work-based education, with emphasis on instructional strategies. Offered spring semester.

EMKT 4120/6120. Human Resource Applications in Marketing Education. 3 hours.

Human relations, communications, mathematics, management, and career development in work-based education programs, with emphasis on instructional strategies. Offered fall semester.

EMKT 7460. Internship in Teaching of Marketing Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Teaching internship in a marketing education program under the supervision of a classroom marketing teacher and a faculty member in occupational studies. Non-Traditional Format: Supervised full-time experience in a school setting. Offered fall and spring semesters.

EMKT 7650. Applied Project in Marketing Education. 3 hours.

Topic or problem in marketing education significantly related to the student's professional responsibility.

Non-Traditional Format: Independent study completed under direction of a faculty member. Offered fall and spring semesters.

Occupational Studies

EOCS 4000/6000. Directed Readings in Occupational Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Individual research in an occupational studies discipline under the direction of a faculty member. Non-Traditional Format: Independent study completed under supervision of a faculty member. Offered fall, spring, and summer semesters.

EOCS 4100/6100. Principles and Practices of Career Education. 3 hours.

Career education in elementary, middle, and secondary schools; major theories of career development; use of standardized assessment, career information resources, and curriculum materials; special issues and trends influencing work and careers. Offered spring semester.

EOCS 4350/6350. Curriculum Planning in Occupational Studies. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for occupational studies programs. Offered fall, spring, and summer semesters.

EOCS 4360/6360. Instructional Strategies in Occupational Studies. 3 hours.

Teaching materials, methods, techniques, and strategies utilized in programs of occupational studies. Offered fall, spring, and summer semesters.

EOCS 4990/6990. Topics in Occupational Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Contemporary issues in occupational studies with emphasis on the effect of these issues on education and the workplace. Offered fall and spring semesters.

EOCS 5030/7030. Organizing and Coordinating Work and Community-Based Education Programs. 3 hours.

Planning, implementing, and directing various school-to-career transition models in education. Offered fall and summer semesters.

EOCS 5050/7050. Problems of Teaching Occupational Studies. 3 hours.

Prerequisite: Permission of department.

Selection, utilization, and evaluation of strategies that support effective teaching in occupational studies. Offered spring semester.

EOCS 5060/7060. Student Organizations in Occupational Studies. 2 hours.

Student organizations in occupational studies programs, emphasizing contributions of organizations to the curricula. Planning, directing, and evaluating activities such as group and individual

projects. Techniques of leadership and group development are included. Offered fall semester.

EOCS 5120/7120. Needs Analysis in Occupational Studies. 3 hours.

Techniques in analyzing occupations, industry, human resources, and communities to determine instructional and training content. Not offered on a regular basis.

EOCS 5450/7450. Internship in Business and Industry. 1-3 hours. Repeatable for maximum 6 hours credit.

Guided learning experiences in a business or industry for the purpose of updating a student's knowledge or skills in an occupational area. Non-Traditional Format: Supervised experience in an occupational setting. Offered fall, spring, and summer semesters.

EOCS 5550/7550. Students With Special Needs in Programs of Occupational Studies. 3 hours.

Learning characteristics of students with special needs, including those who are disabled, economically and academically disadvantaged. Implications for occupational studies are considered and modifications of curriculum and instruction are identified. Offered fall, spring, and summer semesters.

EOCS 6010. Foundations of Work and Family Life Education. 3 hours.

Philosophic and historical foundations for occupational and family life education. Offered fall and summer semesters.

EOCS 6030. Supervision of Occupational Teaching. 3 hours.

Theoretical and research base for the supervision of student teachers in occupational studies; policies, procedures, and problems related to the supervised teaching program. Not offered on a regular basis.

EOCS 7020. Assessing Student Learning in Occupational Studies. 3 hours.

Nature and function of assessing student learning in programs of occupational studies. Offered fall semester.

EOCS 7070. Enhancing Learning in Occupational Studies. 3 hours.

Learning theory and research in programs of occupational studies. Offered spring and summer semesters.

EOCS 7200. Evaluation of Programs in Occupational Studies. 3 hours.

Concepts, principles, and procedures basic to the evaluation of programs in occupational studies. Offered fall semester.

EOCS 7460. Internship in Teaching Occupational Studies. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Teaching internship in an occupational studies program under the supervision of a classroom teacher and a faculty member in occupational studies. Non-Traditional Format: Supervised experience in educational setting. Offered fall, spring, and summer semesters.

EOCS 7560. Diversity in Occupational Education and Work. 3 hours.

Prerequisite: EOCS 5550/7550.

Current issues relevant to students from economically disadvantaged and/or culturally diverse backgrounds. Characteristics of individuals deemed at-risk of school failure, relationship of poverty and cultural diversity, applicable legislation, and educational and societal responsibilities. Offered spring and summer semesters.

EOCS 7650. Applied Project in Occupational Studies. 3 hours.

Topic or problem in occupational studies significantly related to the student's professional responsibility. Non-Traditional Format: Independent study completed under the supervision of a faculty member. Offered fall, spring, and summer semesters.

EOCS 8000. Technology for Education in the Workplace. 3 hours.

Technology for educational and workplace environments. Teaching/learning paradigms that influence the application of educational technologies within the context of education and the workplace. Offered spring semester of even-numbered years.

EOCS 8020. International Occupational Education. 3 hours.

Occupational education systems and international applications. Analysis of factors affecting international work and the planning of international occupational programs are emphasized. Not offered on a regular basis.

EOCS 8030. Organizational Behavior in Programs of Occupational Studies. 3 hours.

Theories and models of behavior in organizations and institutions offering programs in occupational studies. Theories affecting adaptation and change; determinants of individual, interpersonal, and group behavior; and institutional structures and processes are examined. Offered spring semester.

EOCS 8060. Administration and Supervision of Occupational Studies Programs. 3 hours.

Administration and supervision of organizations engaged in occupational education. Management theories of empowerment, team learning, collaboration, and implementation of systems for con-

tinuous organizational learning. Offered spring semester.

EOCS 8990. Research Seminar in Occupational Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Development of research skills necessary to identify an appropriate dissertation topic and prepare the prospectus. Offered fall, spring, and summer semesters.

EOCS 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 27 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

EOCS 9010. Workforce Issues and Policy Development. 3 hours.

Prerequisite: EOCS 6010.

Sociological, economic, political, and demographic trends that impact on occupational education at the local, state, national, and international levels. Offered spring semester.

EOCS 9020. Leadership Development in Occupational Studies. 3 hours.

Leadership philosophies, theories, and research as related to organizations engaged in occupational studies and training. Research and theory are translated into practice for educational leaders in occupational studies. Offered spring semester.

EOCS 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 27 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

EOCS 9600. Educational Research in Occupational Studies. 3 hours.

Critical evaluation of research literature, research paradigms, future research needs, and research design/methodology in occupational studies. Offered fall semester.

EOCS 9630. Critique of Educational Literature in Occupational Studies. 3 hours.

Research studies, dissertations, and journal articles in occupational studies are analyzed in preparation for the development of the dissertation proposal. Offered fall, spring, and summer semesters.

EOCS 9800. Practicum in Occupational Studies. 1-9 hours. Repeatable for maximum 9 hours credit.

Guided learning opportunities allowing students to test principles in the field and to relate theory to

practice in an occupational or educational setting. Non-Traditional Format: Supervised full-time experience in either an educational or business industry setting. Offered fall, spring, and summer semesters.

Technological Studies

ETES 4350/6350. Developing Programs in Technological Studies. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for technological studies. Offered fall semester.

ETES 5010/7010. Technology and Society. 3 hours.

Impact of technology on society and culture. Included is the investigation of positive and negative aspects of various technologies, with specific attention to the technology education curriculum. Offered fall semester.

ETES 5020/7020. Communication Systems. 3 hours.

Communication technology in business and industry. Use of microcomputer applications for computer graphics, desktop publishing, electronic presentation, and telecommunications, including layout and design principles and procedures, graphic production systems, photographic processes, societal impacts, and innovative technologies. Offered fall semester.

ETES 5030/7030. Manufacturing Systems. 3 hours.

Manufacturing through the design, planning, and development of a specific product. Offered fall semester.

ETES 5040/7040. Construction Systems. 3 hours.

Construction practices used to produce structures in residential and commercial settings. Special emphasis placed on safety in laboratory-based education. Offered spring semester.

ETES 5060/7060. Energy Systems. 3 hours.

Present and future applications of the technical, economic, and environmental aspects of energy systems and evaluation of their advantages and disadvantages. Offered on a regular basis.

ETES 5070/7070. Research and Experimentation in Technological Studies. 3 hours.

Solving technological problems through the analysis and implementation of technical research and experimentation methods. Suitable research and experimentation activities will be developed and analyzed for technology education programs in secondary schools. Offered on a regular basis.

ETES 5140/7140. Laboratory Planning, Management, and Safety. 3 hours.

Planning and managing laboratories, including the development of a safety program and selection of equipment, tools, and supplies. Offered fall semester of even-numbered years.

ETES 7080. Critical Issues in Technological Studies. 3 hours.

Current problems and issues, contemporary trends, strategies for initiating change, and resources needed to implement changes in technological studies. Offered summer semester.

ETES 7090. Principles of Technology. 3 hours.

Technological literacy acquired through applied physics concepts and laws. Special emphasis on teaching the integration of mathematics, science, and technology scholarship. Offered summer semester.

ETES 7100. Appropriate Technological Development. 3 hours.

Research and development of self-help technologies used to create and maintain appropriate levels of technological growth. Focuses on field projects, programs, and consultancies testing and demonstrating applications of relevant and efficient technological solutions to problems. Offered summer semester.

ETES 7460. Internship in Technological Studies. 1-12 hours. Repeatable for maximum 12 hours credit.

Work-based program of student activities, such as administration, supervision, teaching, curriculum, or staff development in an existing technological studies program. Non-Traditional Format: Supervised full-time experience in school setting. Offered fall, spring, and summer semesters.

ETES 7650. Applied Project in Technological Studies. 3 hours.

Research and development of a topic or problem in technological studies as related to the student's career. Non-Traditional Format: Arranged meetings with student in person and/or through distance learning technology to guide development of the project. Offered fall, spring, and summer semesters.

READ 6000. Special Problems in Literacy. 1-6 hours. Repeatable for maximum 6 hours credit. Prerequisite: Permission of department.

Approved independent research project pertaining to literacy. Non-Traditional Format: Independent research. Offered fall, spring, and summer semesters.

READ 6010. Foundations of Reading Instruction. 3 hours.

Principles and practices in preschool through secondary reading instruction. Offered fall, spring, and summer semesters.

READ 6020. Children With Reading Problems. 3 hours.

Prerequisite: READ 4010 or READ 6010 or permission of department.

Formal and informal assessments, instructional procedures and materials for improving decoding, word recognition, comprehension, and study skills. Offered fall and summer semesters.

READ 6030. Teaching Reading in the Secondary School. 3 hours.

Concepts and strategies for developing reading and study skills needed by students in secondary schools. Offered fall and spring semesters.

(READ)EADU 6040. Teaching Reading to Low-Literate Adults. 3 hours.

Causal factors contributing to adult literacy and under-education and instructional approaches appropriate for teaching adults to read. Offered on a regular basis.

READ 6050. Materials for Reading Instruction. 3 hours.

Prerequisite: READ 4010 or READ 6010 or permission of department.

Theoretical and practical examination of materials for teaching reading. Offered fall semester.

READ 6060. Content Area Literacy. 3 hours.

Theory and instructional strategies for enhancing reading, writing, speaking, and listening across various subjects in the school curriculum. Offered spring semester.

READ 6070. Middle School Reading. 3 hours.

Prerequisite: (READ 4010 or READ 6010) and permission of department.

Instructional practices, materials, and evaluation techniques for comprehensive reading programs in middle schools. Offered fall semester.

READ 6080. Teaching College Reading. 3 hours.

History of post-secondary reading programs, characteristics of college reading and college readers, and instructional methods and materials for improving college reading. Offered fall semester of even-numbered years.

Reading Education

David Reinking, *Head*
Michelle Commeyras, *Graduate*
Coordinator 542-2718
(Aderhold Hall)

READ 6100. Foundations of Reading Instruction. 3 hours.

Reading instruction for students enrolled in the alternative master's program. Offered fall semester of even-numbered years.

READ 6420. Literacy Development and Instruction in Early Childhood. 3 hours.

Emergent literacy development of preschool through grade three children; theory and research relevant to instructional approaches and practice. Offered spring and summer semesters.

READ 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

READ 7020. Practicum in Clinical Reading. 3 hours. Three 2-hour lab periods.

Prerequisite: READ 6020 or permission of department.

Supervised experience in assessing and tutoring children having problems learning to read. Offered spring and summer semesters.

READ 7110. Computer-Based Instruction in Reading Education. 3 hours.

Integration of computers into instruction to enhance literacy in elementary through secondary schools. Offered spring semester of even-numbered years; offered summer semester of odd-numbered years.

READ 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

READ 7460. Internship in Reading Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised field-based experience related to teaching reading. Non-Traditional Format: This is a directed study course. Format, assignments, and hours are to be determined by the professor on a case-by-case basis. Student workload will be commensurate with credit received upon successful completion of the course. Offered fall and spring semesters.

READ 7800. Sociopolitical Perspectives in Literacy Education. 3 hours.

Classroom practices and research that represent humanist, social constructionist, critical, and post-structural theories and their implications for literacy

education. Offered fall semester of odd-numbered years.

READ 8150. Topics in Computer-Based Reading and Writing. 3 hours.

Theory and research comparing printed and digital forms of written discourse and their effects on literacy. Offered spring semester.

READ 8170. Psychology of Reading. 3 hours.

Psychological foundations of reading ability, instructional methods, and materials. Offered spring semester of odd-numbered years.

READ 8300. Culture, Literacy, and the Classroom. 3 hours.

Prerequisite: READ 4010 or READ 6010 or permission of department.

Social and cultural factors that affect learning and teaching of literacy; application of multicultural perspectives to curriculum development and classroom literacy practice. Offered spring semester of even-numbered years.

READ 8500. Research in College Reading. 3 hours.

Prerequisite: READ 6080 or permission of department.

Post-secondary reading with a focus on theoretical and methodological issues. Offered spring semester of odd-numbered years.

READ 8880. Theories of Reading Comprehension. 3 hours.

Prerequisite: READ 4010 or READ 6010 or permission of department.

Theoretical understandings of reading comprehension relevant to the development of curriculum, evaluation of teaching, and the design and interpretation of research. Offered fall semester of odd-numbered years.

READ 8990. Seminar in Reading Education. 1-2 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Contemporary topics related to literacy and to becoming active participants in the community of literacy scholars. Offered fall and spring semesters.

READ 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

READ 9010. Special Topics in Reading Education. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A topic related to emerging trends, practices, or research in an area related to literacy. Offered spring semester.

READ 9020. Advanced Topics in Reading Problems. 3 hours.

Prerequisite: Permission of department.

The literature pertaining to reading problems. Offered fall semester of odd-numbered years.

READ 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

READ 9600. Research in Reading Education. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Approved independent research in reading education in student's field of specialization through pure or applied research under the direction of a faculty member. Non-Traditional Format: Instructor to determine requirements for appropriate grades on a case-by-case basis. Offered fall, spring, and summer semesters.

READ 9630. Critique of Research Literature in Reading Education. 3 hours.

Prerequisite: Permission of department.

Theory and research in reading education including classic and contemporary works. Offered spring and summer semesters.

READ 9700. Internship in Reading Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Advanced field-based experience related to the teaching of reading. Non-Traditional Format: This is an independent study-in-the-field course. Requirements for satisfactory course completion are to be determined on a case by case basis between the professor and the student, in accordance with departmental and school policy and precedent. Offered fall, spring, and summer semesters.

Science Education

Thomas R. Koballa, *Head*
 Michael J. Padilla, *Graduate Coordinator*,
 542-1763
 (Aderhold Hall)

ESCI 4000/6000. Special Problems in Science Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Specialized study appropriate to the needs of the individual. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

ESCI 4030/6030. Teaching Science to Students with Special Educational Needs. 3 hours.

Basis and practice of modifying science programs/teaching for students with special educational needs and introductory skills for modifying science programs/teaching strategies. Not offered on a regular basis.

ESCI 4450/6450. Science Curriculum and Learning. 3 hours.

Prerequisite: EPSY 2020.

Science curriculum models for students in grades 7 through 12 in relation to goals for science education and classroom practice. Development, selection, and evaluation of curricular materials based on research in learning. Offered fall and spring semesters.

ESCI 4460/6460. Methods of Science Teaching. 3 hours.

Prerequisite: EPSY 2020 and EFND 2030.

Corequisite: ESCI 3450 and ESCI 4450/6450.

Science instructional strategies and classroom assessment for students in grades 7 through 12. Classroom management, lesson planning, and safety in the science classroom. Offered fall and spring semesters.

ESCI 4470/6470. Special Topics in Science Teaching. 3 hours.

Corequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460.

Selected modules on science teaching and learning on special topics such as applications of life science teaching; applications of physical science teaching; interdisciplinary science teaching; multimedia and computers in science teaching; reading, writing, and literacy in science. Offered fall and spring semesters.

ESCI 4480/6480. Technological Capabilities for Science Teaching. 3 hours.

Prerequisite: ESCI 4450/6450 or permission of department.

Classroom applications of electronic technologies to science teaching, including analog audiovisual media, microcomputers, telecommunications networks, and their interactions. Technology-facilitated teaching strategies and curriculum integration in science teaching at the middle and secondary school levels. Offered fall semester.

ESCI 5460/7460. Science Education Student Teaching. 9 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5470/7470 and ESCI 5480/7480.

School-based experiences in grades 7 through 12 under the supervision of a university supervisor. Non-Traditional Format: Eleven weeks, full-time experience. Offered fall and spring semesters.

ESCI 5470/7470. Reflection on Science Teaching. 3 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5460/7460 and ESCI 5480/7480.

Topics following student teaching include development as a reflective practitioner, preparation for being a first year teacher, and professional portfolio development. Offered fall and spring semesters.

ESCI 5480/7480. Philosophy and Leadership in Science Classroom Practice. 3 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5460/7460 and ESCI 5470/7470.

Historical, cultural, social, political, and professional influences related to science classroom practice in grades 7 through 12. Offered fall and spring semesters.

ESCI 6200. Science, Technology, and Society.

3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Science, technology, and society (STS) related goals and activities in the K through 12 curriculum. Emphasis is placed on STS issues in the state of Georgia. Offered summer semester; offered fall semester of odd-numbered years.

ESCI 6220. Marine Environmental Education. 3 hours.

Teaching strategies to interpret marine and coastal environments. Not offered on a regular basis.

ESCI 6230. Environmental Science Education. 3 hours.

Prerequisite: Permission of department.

Environmental curriculum materials and how they can be implemented in the science classroom. Offered summer semester; offered spring semester of even-numbered years.

ESCI 6420. Science for Early Childhood Education. 3 hours.

Science content selection and organization, lesson and unit planning, science teaching and assessment materials, and the sociocultural construction of science knowledge by young chil-

dren. Offered summer semester; offered spring semester of even-numbered years.

ESCI 6990. Research Seminar in Science Education. 3 hours.

Research and evaluation studies in science education. Offered fall semester of even-numbered years; offered summer semester of odd-numbered years.

ESCI 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ESCI 7020. Teaching Science in the Elementary School. 3 hours.

Prerequisite: Permission of department.

Instructional practices, materials, and assessment in teaching biological, physical, and earth sciences in the elementary school. Offered summer semester; offered spring semester of even-numbered years.

ESCI 7040. Teaching Strategies for Middle and Secondary School Science Teachers. 3 hours.

Prerequisite: Permission of department.

Improvement of instructional competencies of teachers of science in middle and secondary schools. Includes preparation in the planning and implementation of instructional strategies. Offered fall semester of even-numbered years; offered summer semester of odd-numbered years.

ESCI 7060. Technology in Science Education. 3 hours.

Prerequisite: ESCI 4480/6480 or EDIT 2020 or permission of department.

Analysis of research, practice, and policy issues regarding the role of electronic technologies in science teaching, curriculum development, and teacher education. Offered spring semester of even-numbered years.

ESCI 7080. Curriculum Planning in Science Education. 3 hours.

Science curriculum from early childhood to high school. Social, psychological, philosophical, and practical influences on science curriculum are applied to the process of selecting and developing curriculum materials. Offered spring and summer semesters of odd-numbered years.

ESCI 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ESCI 7650. Applied Project in Science Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

A topic or problem in science education significantly related to the student's professional responsibilities. Non-Traditional Format: Student working on project for MA degree. Offered fall, spring, and summer semesters.

ESCI 8060. Affective Domains in Science Education. 3 hours.

Values and attitudes embodied in science and technology education. Students will formulate objectives, use instructional techniques, and implement evaluation procedures directed toward important outcomes of the affective domain. Offered spring semester of odd-numbered years.

ESCI 8100. International Science Education. 3 hours.

Science education instruction, curriculum, and policy issues in countries with developed and emerging economies. Not offered on a regular basis.

ESCI 8120. Science Writing and Literature Retrieval. 3 hours.

Scientific writing and literature retrieval techniques in the sciences. Familiarization with library resources and their use through manual and automated retrieval systems and on practical aspects of oral and written communications of scientific information. Not offered on a regular basis.

ESCI 8200. Science Supervision. 3 hours.

Supervision and evaluation of school science programs. Offered summer semester of even-numbered years.

(ESCI)EFND 8210. Multicultural Education Research. 3 hours.

Prerequisite: EFND 7200 and permission of department.

Using multicultural education research articles, chapters, and books; familiarization of seminal multicultural education research studies; and a critical analysis of the research done in one area are the foci of the course. Not offered on a regular basis.

ESCI 8990. Research Seminar in Science Education. 1-6 hours. Repeatable for maximum 9 hours credit. One 2-hour lab period.

Prerequisite: Permission of department.

Integration of theoretical construction in research design and analysis into practical application to science education research, both published and proposed. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall and spring semesters.

ESCI 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ESCI 9010. Problems of Teaching College Sciences. 3 hours.

Instructional practices in higher education with special emphasis on the teaching and learning of science. The establishment of appropriate goals, the selection of effective teaching methods, and the critical elements of assessment will serve as core topics. Not offered on a regular basis.

ESCI 9020. History and Theory of Science Education. 3 hours.

Science education's historical and theoretical background and its influence on current science teaching practices. Examines contributions by science educators and learning theorists who have influenced classroom practices and curriculum development. Offered fall semester of even-numbered years.

ESCI 9080. Science Curriculum Theory and Practice. 3 hours.

Prerequisite: Permission of department.

Historic and present day school science curricula. Literature, recent national reports, as well as national, state, and local standards, will be examined as a context which frames curriculum and its development. Offered spring semester of odd-numbered years.

ESCI 9300. Doctoral Dissertation. 3-15 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

ESCI 9600. Educational Research in Science Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research practicum while involved in a research problem, including activities such as searching the literature, collection of data, or processing data. Non-Traditional Format: Research practicum. Offered fall, spring, and summer semesters.

ESCI 9630. Critique of Educational Literature in Science Education. 3 hours.

Interpretation and evaluation of selected research and theoretical writings in science education. Offered fall semester of odd-numbered years.

ESCI 9700. Internship in Science Education. 1-9 hours. Repeatable for maximum 9 hours credit.

The development of instructional materials and their use in classroom settings based on the student's professional responsibility. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

ESCI 9730. Science Teacher Education - Theory and Practice. 3 hours.

Research and practice of science teacher education, including historical perspectives, models for the preparation of teachers, and reform movements. Offered summer semester of odd-numbered years.

Social Science Education

Ronald L. VanSickle, *Head*

John D. Hoge, *Graduate Coordinator*,
542-7265
(Aderhold Hall)

ESOC 4000/6000. Special Problems in Social Science Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Intensive study of a problem in social science education through library research or collection and analysis of primary data. Non-Traditional Format: Individual study supervised by a faculty member. Offered fall, spring, and summer semesters.

ESOC(HIST) 4150/6150. Teaching United States History. 3 hours.

Classic historiography and current debates among historians over major themes and events in United States history. Examination of ways in which this historical scholarship can be incorporated into social studies teaching. Evaluation of materials and methods used to teach United States history in secondary and middle schools. Offered on a regular basis.

ESOC 4350/6350. Social Science Curriculum in Secondary Schools. 3 hours.

Prerequisite: ESOC 2450 or permission of department.

Current status of and trends in the social science curriculum in secondary schools, with illustrations of selected curriculum models for both cognitive and affective learning. Offered fall and spring semesters.

ESOC 4360/6360. Methods of Teaching Social Science in Secondary Schools. 3 hours.

Prerequisite: Permission of department.

Instructional objectives and the examination and application of instructional procedures, utilization of media, and methods of evaluation. Offered fall and spring semesters.

ESOC 4400/6400. Teaching Social Studies in the Middle Grades. 3 hours.

Prerequisite: Permission of department.

Instructional procedures and materials focusing upon the cognitive and affective processes relevant to middle grades social studies education. Offered on a regular basis.

ESOC 5010/7010. Teaching of Geography. 3 hours.

Prerequisite: Permission of department.

Geographic principles and the history of geography in the school curriculum; the literature of the field, including textbooks; the application of special techniques; and geographic evaluation. Offered on a regular basis.

ESOC 5200/7200. Economic Education in the Social Science Curriculum. 3 hours.

Instructional strategies and materials for teaching basic economic concepts in an integrated kindergarten through grade 12 social science curriculum, with emphasis on utilizing a decision-making model for analyzing contemporary economic problems. Offered on a regular basis.

ESOC 5460/7460. Student Teaching in Social Science Education. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Teaching social studies in the middle or secondary grades under supervision of school and university professional personnel. Non-Traditional Format: In-school teaching experience in middle and secondary grades social studies supervised by faculty. Offered fall and spring semesters.

ESOC 5520/7520. Teaching Politics, Government, and Citizenship. 3 hours.

Prerequisite: Permission of department.

Rationale for and resources in political science and civic/citizenship education, the role of teachers and schools in political socialization, and teaching procedures for instruction on state and local citizenship in middle grades and high schools. Offered on a regular basis.

ESOC 6380. Computer Technology Applications in Social Science Education. 3 hours.

Two lectures and one 2-hour lab period.

Applications of computer technology for teaching social studies in middle and secondary grades, including instructional design, adaptation, and authoring; accessing resources through computer technology. Offered on a regular basis.

ESOC 6990. Research Seminar in Social Science Education. 3 hours.

Fundamentals of research in social science education. Offered on a regular basis.

ESOC 7000. Master's Research. 1-9 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ESOC 7050. Problems of Teaching Secondary Social Studies. 3 hours.

Selection, utilization, and evaluation of teaching procedures in history and the social sciences to various ability levels of students. Offered on a regular basis.

ESOC 7080. Curriculum Planning in Social Sciences. 3 hours.

Selection, utilization, and evaluation of curricular content and materials in history and the social sciences appropriate to various ability levels of pupils. Offered on a regular basis.

ESOC 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

ESOC 7420. Social Studies for the Young Child. 3 hours.

Social studies curriculum and instruction models relevant to instruction for preschool and primary level children. Offered on a regular basis.

ESOC 7650. Applied Project in Social Science Education. 3 hours.

Prerequisite: Permission of department.

A topic or problem in social science education significantly related to the student's professional responsibilities. Non-Traditional Format: Individual student research supervised by a faculty member. Offered fall, spring, and summer semesters.

ESOC 8010. History of Social Studies Education. 3 hours.

Prerequisite: Permission of department.

Major themes, ideas, and personalities in the historical development of curriculum and instruction in social studies in the United States since 1880, including comparisons to selected other nations. Offered on a regular basis.

ESOC 8250. Values Education for Citizenship. 3 hours.

Prerequisite: Permission of department.

Theory, research, and classroom practice in values education, focusing specifically on the devel-

opment of values needed for citizenship in a democracy. Various contemporary and historic approaches to values education, curriculum materials, and state and district policies. Offered on a regular basis.

ESOC 8990. Research Seminar in Social Science Education. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research design problems in social science education. Offered on a regular basis.

ESOC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

ESOC 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

ESOC 9600. Research in Social Science Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Directed independent research in social science education. Non-Traditional Format: Individual research supervised by a faculty member. Offered fall, spring, and summer semesters.

ESOC 9630. Critique of Educational Literature in Social Science Education. 3 hours.

Prerequisite: Permission of department.

Review and analysis of research and other literature in social science education. Offered on a regular basis.

ESOC 9700. Internship in Social Science Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised internship in instruction, curriculum development, supervision, or evaluation in social science education. Non-Traditional Format: Individual professional work supervised by a faculty member. Offered fall and summer semesters.

Social Work Education

Nancy P. Kropf, *Graduate Coordinator*,
542-5429
(Tucker Hall)

Course of study requirements for students interested in school social work can be obtained by contacting the Graduate Coordinator.

ESWK 7155. Practicum in School Settings. 4 hours. Repeatable for maximum 8 hours credit. Not open to students with credit in SOWK 7055. Prerequisite: Permission of department. Field experience in schools integrating knowledge of human behavior and interventive practice models appropriate for school settings. Offered fall and spring semesters.

ESWK 7417. Home, School, and Community Practice. 2-3 hours. Repeatable for maximum 3 hours credit.

Relationships among home, school, and community systems. Identifies approaches to linking those systems in the best interest of children/youths. Not offered on a regular basis.

Special Education

Cheri A. Hoy, *Head*
David L. Gast, *Graduate Coordinator*,
542-4617
(Aderhold Hall)

The Department of Special Education offers the following degrees with a major in special education: MEd, EdS, and PhD.

SPED 4000/6000. Directed Study in Special Education. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department. Specialized training appropriate to the needs of selected individuals. Non-Traditional Format: Directed study. Offered on a regular basis.

SPED 7000. Master's Research. 1-9 hours. Repeatable for maximum 9 hours credit. Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

SPED 7010. Clinical Assessment in Special Education. 3 hours.

Prerequisite: Permission of department.

Corequisite: SPED 7010L.

Theory and practice in the use of standardized and dynamic evaluation techniques required for the assessment and program planning of individuals with disabilities. Offered on a regular basis.

SPED 7010L. Special Education Assessment Practicum Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: SPED 7010.

Laboratory in the assessment of special education. Offered on a regular basis.

SPED 7100. Early Childhood Special Education. 3 hours.

Prerequisite: Permission of department.

Seminar in early childhood special education, including history of and rationale for early intervention from birth through age five, typical and atypical early development, family and diversity issues. Emphasis is on assessment, including screening and play-based assessment. Offered every year on a regular basis.

SPED 7110. Mental Retardation. 3 hours.

Prerequisite: Permission of department.

The characteristics of individuals with mental retardation across the lifespan. Theory and current issues as they relate to definition, assessment, eligibility, diversity, service delivery, and family needs. Offered every year on a regular basis.

SPED 7120. Learning Disabilities. 3 hours.

Prerequisite: Permission of department.

Characteristics of individuals with learning disabilities across the lifespan. Theory and current issues as they relate to definition, assessment, eligibility, diversity, service delivery, and family needs. Offered every year on a regular basis.

SPED 7130. Behavioral Disorders. 3 hours.

Prerequisite: Permission of department.

The characteristics of individuals with behavioral disorders across the lifespan. Theory and current issues as they relate to definition, assessment, eligibility, diversity, service delivery, and family needs. Offered every year on a regular basis.

SPED 7200. Methods and Curriculum in Early Childhood Special Education. 3 hours.

Prerequisite: SPED 7100 and permission of department.

Program models, instructional methods, and curricula in early childhood special education. Emphases are on developmentally appropriate

practice, family systems, diversity, transitions, and methods for collaboration. Offered every year on a regular basis.

SPED 7210. Methods for Teaching Functional Skills. 3 hours.

Prerequisite: Permission of department.
Behavioral psychology learning principles and procedures in the design of instructional programs to teach basic life skills. Focus is on data-based instructional strategies that facilitate skill acquisition, fluency, maintenance, and generalization. Offered every year on a regular basis.

SPED 7220. Methods for Teaching Academic Skills. 3 hours.

Prerequisite: Permission of department.
Research-based methods and materials used to teach academic skills to persons with mild disabilities across different school and vocational settings. Offered every year on a regular basis.

SPED 7230. Methods for Teaching Social Skills. 3 hours.

Prerequisite: Permission of department.
Behavioral analysis as applied to socially significant behavior. Emphases include skills curricula, social behavior across cultures, school- and community-based instruction, generalization of skills, and validation of intervention procedures. Offered every year on a regular basis.

SPED 7240. Methods for Postsecondary Transition. 3 hours.

Prerequisite: Permission of department.
Instructional procedures, demographics, social policies, and school and post-school factors that predict successful transitions for individuals with disabilities. Collaborative transition models, supported employment, independent and supported living, education/training, and community-based instruction are emphasized, as are service-delivery issues related to diverse populations. Offered every year on a regular basis.

SPED 7240L. Postsecondary Transition Laboratory. 1-3 hours. Repeatable for maximum 3 hours credit. 1-3 lab periods of 1-3 hours per week.

Prerequisite: Permission of department.
Development and/or implementation of curricula models and/or transition models. Offered every year on a regular basis.

SPED 7250. Written Language Disorders. 3 hours.

Prerequisite: Permission of department.
The literature on the psychology of written language for individuals with developmental disabilities from diverse backgrounds and cultures. Offered every year on a regular basis.

SPED 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

SPED 7440. Practicum in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.
Supervised field experience related to teaching individuals with disabilities. Non-Traditional Format: Field based practicum. Offered on a regular basis.

SPED 7460. Internship in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: SPED 7440 and permission of department.
Supervised culminating field experience related to teaching individuals with disabilities. Non-Traditional Format: Field based internship. Offered on a regular basis.

SPED 7500. Advanced Technology in Special Education. 3 hours.

Prerequisite: [(SPED 4040 and SPED 4040L) or (EDIT 2020 or EDIT 6150)] and permission of department.
Technology-based solutions for persons with disabilities. Emphases include technological applications of situated learning, system analysis, and issues related to diversity. Offered every year on a regular basis.

SPED 7500L. Advanced Technology in Special Education Laboratory. 1-3 hours. Repeatable for maximum 3 hours credit. 1-3 lab periods of 1-3 hours per week.

Prerequisite: Permission of department.
Specialization in technology matching the participants' degree programs. Offered on a regular basis.

SPED 7600. Topics in Special Education. 3 hours.

Prerequisite: Permission of department.
Critical discussion of contemporary and cutting edge issues of people with disabilities. Non-Traditional Format: Seminar in special education. Offered every year on a regular basis.

SPED 7630. Critique of Literature in Special Education. 3 hours.

Prerequisite: Permission of department.
Analysis of literature related to contemporary issues in special education. Offered every year on a regular basis.

SPED 7650. Applied Project in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.
Research study of a topic or problem in special education related to the student's professional

work. Non-Traditional Format: Individual or applied project. Offered on a regular basis.

SPED 8000. Directed Study in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Specialized and advanced study in special education. Non-Traditional Format: Directed study. Offered on a regular basis.

SPED 8320. Laws Affecting Individuals with Disabilities. 3 hours.

Prerequisite: Permission of department.

Court rulings, legislative enactments, administrative regulations, and their impact on the function of general and special education in providing public education for individuals with disabilities. Offered every year on a regular basis.

SPED 8370. Single-Subject Research Methodology in Special Education. 3 hours.

Prerequisite: Permission of department.

Research methods related to individuals with disabilities that employ single-subject research methodology. The design of a research proposal that uses single-subject research methodology. Offered every year on a regular basis.

SPED 8990. Research Seminar in Special Education. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Current issues in special education research. Non-Traditional Format: Individual or special projects. Offered on a regular basis.

SPED 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered on a regular basis.

SPED 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered on a regular basis.

SPED 9600. Issues and Trends in Special Education. 3 hours.

Prerequisite: Permission of department.

Contemporary issues and trends impacting the education of people with disabilities. Offered every year on a regular basis.

SPED 9800. Advanced Practicum in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Practicum in special education at an advanced level. Non-Traditional Format: Advanced field-based practicum. Offered on a regular basis.

SPED 9930. Internship: College Teaching in Special Education. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A supervised internship involving college teaching of special education. Non-Traditional Format: Internship. Offered on a regular basis.

SPED 9940. Internship: Supervision of Special Education Teachers. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised internship concerning the supervision of students in field settings. Non-Traditional Format: Internship. Offered on a regular basis.

The School of Environmental Design

John F. Crowley, Dean
(Caldwell Hall)

The School of Environmental Design offers two graduate degree programs: Master of Landscape Architecture (initiated 1954) and Master of Historic Preservation (initiated 1982). Both programs are concerned with the quality of environments.

The two programs are housed in Denmark Hall. Each one is directed by a graduate coordinator who can provide additional information to prospective students. Out-of-state students are encouraged to investigate whether they qualify for in-state tuition rates available through the Academic Common Market.

Master of Landscape Architecture (MLA): Applicants are accepted into the program from both design and non-design backgrounds. Those entering without the BLA (or equivalent degree) are admitted into the three-year degree program. Applicants holding a recent BLA degree enter directly into the second year of study. Applicants holding the BLA degree with ten or more years' responsible professional experience may apply for a one-year accelerated program emphasizing specialization.

The MLA program is structured around a sequence of design studios, lecture and seminar courses and electives. Design studios are supported by required courses in theory, landscape construction, plant communities, professional practice, and research methods and applications. Areas of specialization are supported by elective courses both within the School and from other departments.

All candidates are required to have their applications completed prior to March 31 of the year they plan to enter. Completion prior to December 30 is to the student's advantage. Graduate Record Examination scores are a required part of a complete application.

A limited number of scholarships and assistantships are administered by the School and the University.

Master of Historic Preservation (MHP): Students from diverse backgrounds are often surprised to discover the manner in which their undergraduate degree may either relate directly to historic preservation or provide skills useful in the pursuit of historic preservation as a career. Thus, interested individuals are encouraged to visit the School to explore their potential for success in this new career area. As an area of academic study, historic preservation has been available for just three decades. Within this period, there has been a rapid expansion of career opportunities at the various levels of government as well as within the private sector.

The two-year program of study, required for the Master of Historic Preservation degree, provides a comprehensive program which includes an internship as well as a thesis. Financial assistance, in the form of research assistantships, is available on a competitive basis. Students interested in applying for assistantships for the following year must have been accepted for admission by April 1.

In addition to the MHP program, the School, in cooperation with the School of Law, offers a joint JD/MHP four-year combined degree as well as a Preservation Studies Certificate Program. The School is a member of the National Council of Preservation Educators and meets their standards for academic programs in historic preservation.

Environmental Design

EDES 4090/6090. Architectural Design. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 4060 or LAND 6020.

Major design determinants in architecture. Inquiry into structural, functional/programmatic, theoretical, and environmental issues will be focused on developing an understanding of the relationship between architecture and landscape. Not offered on a regular basis.

EDES 4100/6100. Historic Preservation Design Studio. 4 hours. Two 4-hour lab periods.

An advanced design studio focused on contemporary preservation issues. Emphasis will be placed on new design and community planning. Not offered on a regular basis.

EDES 4250/6250. Advanced Computer-Aided Design. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of computer-aided design software for the development of environmental design and land planning projects. Not offered on a regular basis.

EDES 4260/6260. Computer Rendering and Animation. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of computer rendering and animation software for the visualization of site design and land planning projects. Not offered on a regular basis.

EDES 4270/6270. Environmental Design Uses of Geographic Information Systems. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of geographic information systems software for the development of environmental design and land planning projects. Not offered on a regular basis.

EDES 4610/6610. Vernacular Architecture. 3 hours.

Vernacular or folk architecture around the world and through history. Emphasis will be on how built form is a response to natural/physical and socio-cultural determinants. Both anthropological and art historical approaches to the subject will be explored. Not offered on a regular basis.

EDES 4620/6620. Evolution of American Architecture. 3 hours.

Prerequisite: (EDES 2510 and EDES 2520) or EDES 6510.

History of American architecture from colonial times to World War II. Emphasis is on the development of both built form and the intellectual and social currents influencing that form. Not offered on a regular basis.

EDES 4630/6630. The History and Theory of Twentieth-Century Architecture. 3 hours.

Prerequisite: EDES 2520 or permission of school. The major monuments and theories of world architecture from the early modern period to the present. Major monuments will be presented in slide lecture; theory in readings and discussions. Not offered on a regular basis.

EDES 4640/6640. The History of Urban Planning. 3 hours.

Prerequisite: (EDES 2510 and EDES 2520) or EDES 6510 or permission of school.

Major movements and monuments in the history of urban planning. The first half of the course will cover the world from ancient times to the present; the second half will focus on America from colonial times to the present. Not offered on a regular basis.

EDES 4650/6650. City Planning. 2 hours.

The study of urban places. Planning processes and regulatory tools and techniques used by urban communities to achieve community goals and objectives. Not offered on a regular basis.

EDES 4660/6660. Environment and Behavior: Theory and Practice. 2 hours.

The interactions and relationships between people and their physical environments. Focuses on the social, behavioral, and cultural aspects of design. Not offered on a regular basis.

EDES 4670/6670. History of Landscape Technology and Management. 2 hours.

Prerequisite: EDES 2520 or EDES 6510.

Technological influence upon attitudes toward nature and natural resources that result in a changed landscape. Not offered on a regular basis.

EDES 4680/6680. Conservation of Culturally Significant Resources in Rural Areas. 2 hours.

Prerequisite: Junior standing.

The cultural evolution of rural landscapes in the United States. Exploration of approaches and methodologies used in identifying and protecting significant features, both natural and cultural, in a constantly changing environment. Not offered on a regular basis.

EDES 4920/6920. Directed Study in Computer Application. 1-3 hours. Repeatable for maximum

9 hours credit. 1-3 lab periods of 2 hours per week.

Prerequisite: EDES 3230 or EDES 6220.

Supervised research into computer-generated visualizations as they may be applied in environ-

mental design and land planning. Not offered on a regular basis.

EDES 6210. Representation and Communication I. 3 hours. One lecture and two 2-hour lab periods.

Drawing, computer graphics, and other methods of representing and communicating design ideas. Offered fall semester.

EDES 6220. Representation and Communication II. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 6210.

Exploration of a variety of methods of representing and communicating design ideas. Offered spring semester.

EDES 6510. Evolution of the American Landscape. 2 hours.

Corequisite: LAND 6010.

The ways in which Americans of various historical periods and in diverse places have shaped the landscape to accommodate specific needs and to express cultural attitudes, values, and aspirations. Offered fall semester.

EDES 6520. Ideas of the Garden. 2 hours.

Corequisite: LAND 6020.

The garden as an archetypal concept through which different cultural groups have expressed their understanding of the world and of human history from ancient times to the present. Offered spring semester.

EDES 6530. Ideas of Nature. 2 hours.

Corequisite: LAND 6030.

The idea of nature as a cultural construct that is continually subject to reappraisal and revision with critical implications for the environmental sciences, the design arts, and humanistic studies. Offered fall semester.

EDES 6540. Ideas of Community and Place. 2 hours. One lecture and one 2-hour lab period.

Corequisite: LAND 6040.

The relationship between concepts of community and the physical environments (home, village, town, city, region) that may be designed in ways that foster personal and societal commitment to community and place. Offered spring semester.

EDES 6900. Research Strategies. 1 hour. One 2-hour lab period.

Prerequisite: Permission of school.

Alternative methods of inquiry appropriate to environmental design. Offered fall semester.

EDES 7350. Landscape Management. 3 hours. One lecture and two 2-hour lab periods.

Landscape management techniques with an emphasis on the values of environmental conservation and historic preservation. Offered fall semester.

EDES 7550. Values in Environmental Design. 2 hours. One lecture and one 2-hour lab period.

Corequisite: LAND 7050.

The societal values that attach cultural significance to some places but not others and the forms (scientific, literary, artistic) through which these judgements are promulgated or subverted. Offered fall semester.

Historic Preservation

John C. Waters, *Graduate Coordinator*,
542-4706
(Denmark Hall)

HIPR 4000/6000. Introduction to Historic Preservation. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of school.

Historic preservation theory, its evolution and practice, and its relationship to the concept of environmental quality. Offered fall semester.

HIPR 6100. Cultural Resource Assessment. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: HIPR 4000/6000.

Identification, assessment, and documentation of cultural resources at all scales from historic interiors and individual sites to distinct districts and entire townscapes. Offered spring semester.

HIPR 6150. Rural Preservation. 3 hours.

Prerequisite: Permission of school.

The evolution of the rural historic landscape, its aesthetic values, preservation problems, and legal and financial resources available for landscape preservation. Open space planning will be emphasized. Not offered on a regular basis.

HIPR 6200. Preservation Law. 3 hours.

Prerequisite: HIPR 4000/6000.

Analysis of significant national, state, and local preservation laws and ordinances, and the legal functions for these laws; major legal challenges past, current, and anticipated; and, a review of the positive and negative effects of the application of various legal measures on the historic environments they protect. Offered spring semester.

HIPR 6320. Historic Resource Documentation. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 6210 or permission of school.

The skills and processes of documenting historic resources at basic, intermediate, and archival levels, utilizing both graphic and photographic techniques. Not offered on a regular basis.

HIPR 6350. Building Materials Conservation. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: HIPR 4000/6000.

Restoration and rehabilitation theory and practice. Emphasis is on the history of building technology and the identification and treatment of common conservation problems in historic structures. Offered fall semester.

HIPR 6510. Preservation Economics/Grant Writing. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: HIPR 4000/6000.

The economic impact of preservation upon communities, its measurement in terms of both financial and environmental benefits and the financial needs and fiscal management of preservation organizations and agencies, with emphasis upon the development and preparation of funding and/or grant proposals. Not offered on a regular basis.

HIPR 6600. Design Guidelines. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: HIPR 4000/6000 or permission of school.

Theory and practice of compatible change within historic districts, the evaluation and documentation of visual character, how to set design goals and produce design guidelines regarding additions to historic buildings, rehabilitation and restoration, new construction, improving the compatibility of non-contributing buildings, signage, urban design and setting, and landscapes. Not offered on a regular basis.

HIPR 6720. Preservation Advocacy/Professional Practice. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: HIPR 4000/6000.

Preservation advocacy strategies and techniques with emphasis on application to preservation issues and problems and the improvement of individual communication, behavioral, and management skills, including conflict resolution. Beyond advocacy there will be a focus upon the ethical standards and operational practices expected of preservation professionals. Offered fall semester.

HIPR 6750. Special/Independent Studies. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of school.

Individual special studies or projects which provide the opportunity to pursue research interests in historic preservation. Non-Traditional Format: Directed study. Not offered on a regular basis.

HIPR 6800. Contemporary Preservation Perspectives. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: Permission of school.

Preservation issues, preservation practice, and special preservation topics as related to the concerns of preservation professionals, preservation

organizations and agencies, and the protection and interpretation of regional historic resources. Not offered on a regular basis.

HIPR 6850. Historic Preservation Planning Studio. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: HIPR 4000/6000 or permission of school.

The theory and techniques of preservation planning. Emphasis on survey of historic resources and development of community preservation programs. Offered spring semester.

HIPR 7000. Master's Research. 1-6 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

HIPR 7300. Master's Thesis. 1-3 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of school.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered on a regular basis.

Landscape Architecture

Bruce K. Ferguson, *Graduate Coordinator*,
542-4720
(Denmark Hall)

LAND 4070/6070. Garden Design in America. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 4060 or LAND 6020.

Design traditions which have shaped American gardens over the past 200 years with emphasis on the twentieth century, and plants, uses, design forms, and environmental conditions through which these traditions have been expressed. Designing gardens informed by traditional models. Not offered on a regular basis.

LAND 4080/6080. Gardens as Nurturing Environments. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 4060 or LAND 6020.

Physical, psychological, perceptual, and cultural influences of garden design, with an emphasis on gardens for healing, play, discovery/learning, and other sensory/therapeutic stimuli. Not offered on a regular basis.

LAND 4150/6150. Land Development Studio. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 4060 or LAND 6340.

Land development process. Landscape architecture and real estate students prepare a report that includes absorption, targeted market, estimates, financial feasibility, site planning, design, and building types to be reviewed by a visiting jury of developers, designers, planners, and brokers. Not offered on a regular basis.

LAND 4400/6400. Plant Communities of the Southeast. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: LAND 4360 or LAND 6320.

The plant communities of the southeastern United States, with emphasis on botanical and aesthetic characteristics, factors affecting community composition, and community dynamics. Not offered on a regular basis.

LAND 4580/6580. Landscapes in Painting, Poetry, Literature, and Design. 2 hours.

Prerequisite: EDES 1500 or EDES 6520.

The appreciation and understanding of nature, landscape, and garden in painting, poetry, and literature. Study of how changing attitudes to the environment affect aesthetic appreciation of landscape and are reflected in the design of gardens and the description of landscapes in art and literature. Not offered on a regular basis.

LAND 4710/6710. Professional Practice. 2 hours.

Prerequisite: Junior standing.

The legal environment of business focusing on public and private law. Professional relations during project management, resolution of disputes, the court system, torts, real property/liens, contract law, specification writing, insurance bonds, business organizations, ethics, and professional registration. Offered fall semester.

LAND 4800/6800. Field Study in Contemporary Landscape Architecture. 3 hours. One 3-hour lab period.

Prerequisite: (LAND 2020 and EDES 2520) or permission of school.

Current and historic works and individuals in the fields of landscape architecture, architecture, historic preservation, and urban design in the United States. The class will visit significant projects, offices, national parks, and landmarks during a ten to fourteen-day trip to another region of the country. Non-Traditional Format: Field study. Not offered on a regular basis.

LAND 4810/6810. Field Study in American Garden Design. 2 hours.

Prerequisite: LAND 4070/6070.

Recognized professional firms, garden designers, and gardens central to the evolution and current culture of garden design in America. Non-Traditional Format: Course consists of a 10-11 day field

trip to earn two hours credit. Not offered on a regular basis.

LAND 4910/6910. Independent Project. 2-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of school.

Special study or project under the direction of faculty. Offered fall, spring, and summer semesters.

LAND 6010. Landscapes. 4 hours. Two 4-hour lab periods.

Corequisite: EDES 6510.

Design, an appreciation of materials and an understanding of processes. Studio projects selected to expose students to the wide range of approaches to design and landscapes. Offered on a regular basis.

LAND 6020. Gardens. 4 hours. Two 4-hour lab periods.

Corequisite: EDES 6520.

The garden as the central image and metaphor in landscape architecture. Studio projects selected to explore the image and the metaphor in a variety of social and environmental contexts. Offered spring semester.

LAND 6030. Nature and Sustainability. 4 hours.

Two 4-hour lab periods.

Corequisite: EDES 6530.

Concepts of nature and their implications for landscape architecture, with particular attention to the issue of sustainability. Projects selected to investigate alternative design strategies in a variety of environments from wilderness to city center. Offered fall semester.

LAND 6040. Community and Place. 4 hours.

Two 4-hour lab periods.

Corequisite: EDES 6540.

Concepts of community and place in architecture and urban design and their implications for landscape architecture. Projects selected to investigate alternative design strategies at a variety of scales and densities of habitation, from a single dwelling unit to a city. Offered spring semester.

LAND 6310. Landscape Ecology: Materials and Processes. 3 hours. One lecture and two 2-hour lab periods.

Landforms, geology, hydrology, soils, and biotic communities, with an examination of ecological concepts and their application at the landscape scale. Offered fall semester.

LAND 6320. Landscape Design: Materials and Processes. 3 hours. One lecture and two 2-hour lab periods.

The history and ecology of plants and related materials associated with the design of gardens. Offered spring semester.

LAND 6330. Landscape Construction and Engineering I. 3 hours. One lecture and two 2-hour lab periods.

Landscape construction and engineering through inquiry into their ability to implement values of sustainability. Offered fall semester.

LAND 6340. Landscape Construction and Engineering II. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: LAND 6330.

Applications of landscape construction and engineering through inquiry into their ability to implement values of community and place. Offered spring semester.

LAND 6700. Landscape Architecture Internship. 8 hours.

Prerequisite: Permission of school.

Professional office experience under the supervision of licensed landscape architects or related practitioners. Non-Traditional Format: Professional office experience under the supervision of licensed landscape architects or related practitioners. A minimum of two months full-time supervised employment for eight credits. Offered summer semester.

LAND 7000. Master's Research. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall semester.

LAND 7050. Design and Meaning. 4 hours. Two 4-hour lab periods.

Corequisite: EDES 7550.

A studio inquiry into how a place acquires meaning and significance, and the implications of this for landscape architecture. Projects selected to investigate alternative design strategies in a variety of historical contexts from "old" to "new" places. Offered fall semester.

LAND 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of school.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered spring semester.

LAND 7850. Practicum in Teaching Landscape Architecture. 3 hours.

Prerequisite: Permission of school.

Experience in teaching undergraduate professional skills under the direction of a faculty mentor. Non-Traditional Format: Experience in teaching undergraduate professional skills under the direction of a faculty mentor. Not offered on a regular basis.

The College of Family and Consumer Sciences

Sharon Y. Nickols, Dean
(Dawson Hall)

The College of Family and Consumer Sciences offers the Doctor of Philosophy and Master of Science degrees in each of its departments: Child and Family Development; Foods and Nutrition; Housing and Consumer Economics; and Textiles, Merchandising, and Interiors. The Department of Child and Family Development and the Department of Foods and Nutrition also offer the Master of Home Economics degree. A Pre-Professional Certificate in Marriage and Family Therapy is also offered to graduate students meeting certain requirements. (Please see Index.) The Department of Child and Family Development offers an AAMFT accredited program. A certificate is also available in gerontology. (Please see Index.) Facilities include well equipped laboratories in foods, nutrition, clothing, textiles, housing and family resource management; the Marriage and Family Therapy Clinic; the McPhaul Child and Family Development Center for infants and young children; and the computer laboratories located in Dawson Hall. Applications for admission and requests for assistantships should be addressed to the graduate coordinator in the department of interest.

For a description of the MS and PhD interdisciplinary program in toxicology (offered through Foods and Nutrition), see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

Child and Family Development

Patsy L. Skeen, *Head*
Sharon J. Price, *Graduate Coordinator*,
542-4831
(Dawson Hall)

The MS and PhD programs are designed to: enable students to gain and demonstrate competencies in acquiring, integrating, and applying substantive and theoretical knowledge of both child development and family relationships; provide knowledge and skills for conducting research on individual and family development and behavior; and enable students with skills for engaging with individuals, families and other professionals in processes that prevent or solve problems and promote competence and well-being.

CHFD 4090/6090. Advanced Infant Development. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CHFD 3900.

Emotional, social, cognitive, and physical development in infancy. Supervised observation in In-

fant Center and in selected homes. Offered spring semester.

CHFD(HACE) 4500/6500. Second Half of Life. 3 hours.

Prerequisite: Junior standing or permission of department.

Second half of life; resource management, living patterns, and housing, sexuality, roles, family relationships, community and organization involvement, and career opportunities. Offered spring semester of odd-numbered years.

CHFD 4600/6600. Older Individuals. 3 hours.

Prerequisite: CHFD(HACE) 4500/6500.

Older individuals in marriage, family, and society. Special attention given to marital relationships, widowhood, parent and adult-child relationships and care giving, social networks and ecological issues as they affect older individuals and their families. Offered fall semester of odd-numbered years.

CHFD(SOCI) 4610/6610. The Family. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100.

Family study utilizing data from the fields of anthropology, individual and social psychology, history, sociology, economics, and psychiatry. Not offered on a regular basis.

CHFD 4620/6620. Women in the Family and Society. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Women's experiences and gender issues in relation to family and individual development. Research and policy implications are examined. Offered fall semester of even-numbered years.

CHFD 4700/6700. The Family and Adolescence. 3 hours.

Prerequisite: Undergraduate level only: CHFD 3700.

Advanced consideration of unique features of the family that includes an adolescent member. Special attention is given to dual processes of adolescent development and family development. Offered spring semester of even-numbered years.

CHFD 4810/6810. Hospitalized Child and the Family. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100 and CHFD 2950-2950L and permission of department.

Developmental and psychosocial issues of hospitalized children and their families. Organization and services in health care settings investigated. Offered spring semester.

CHFD 4850/6850. Family Development. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100 or SOCI 1101.

Families as social groups that develop their own patterns, meanings, and processes across family life cycle in both conventional and alternative family forms. Offered spring semester of even-numbered years.

CHFD 4860/6860. Parent Education and Child Guidance. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100 and CHFD 2950-2950L.

Application of theory, research, and developmental practice to understanding the role of parents, teachers, and community leaders in guiding the behavior of children from birth through adolescence, and to establishing mutually satisfying parent-child relationships through the life cycle. Programs for parents and parental interactions with schools and other social institutions. Offered spring semester of odd-numbered years.

CHFD 4870/6870. Human Sexuality Across the Life Span. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100.

Attitudes toward and values associated with human sexuality, based on substantive and theoretical information, with emphasis on how development and interactions across the life span are affected by familial, social, cultural, and psychological factors. Offered spring semester of even-numbered years.

CHFD 5120/7120. Observation and Assessment Techniques. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2950-2950L.

Directed experiences in observing, recording, and assessing behavior and interaction among children and families, and examination of program assessment. Offered fall semester of even-numbered years.

CHFD 5130/7130. Creative Activities for Young Children. 3 hours.

Prerequisite: CHFD 4860/6860.

Quality individual and group programming for young children based upon current theory, research, and developmentally appropriate practice. Special emphasis will be placed upon the integration of creative activities including art, music, movement, nutrition, health, dramatic play and computer applications. Offered spring semester of even-numbered years.

CHFD 5140/7140. Group Programs for Young Children. 9 hours. Five lectures and four 4-hour lab periods.

Prerequisite: Undergraduate level only: CHFD 3900.

Developmental and educational theories applied to the design, content, and implementation of group programs for young children. Not offered on a regular basis.

CHFD 5160L/7160L. Administration of Children's Programs. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHFD 4860/6860 and CHFD 5140/7140.

Theories and administration of child care programs. Topics include planning, scheduling, enrollment, certification, and evaluation. Laboratory work required. Not offered on a regular basis.

CHFD 5710/7710. Study Tour in Child and Family Development. 3-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Selected topics in child and family development. Combined with site visits to relevant locations. Non-Traditional Format: Lecture, tour, and other activities for the length of the program. Offered summer semester.

CHFD 5900/7900. Preinternship Orientation. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Junior or senior standing or permission of department. Orientation to and preparation for doing an internship. Offered fall and spring semesters.

CHFD 5910/7910. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in settings with employed persons with a degree in child and family development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 5920/7920. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in programs for children under six with employed persons with a degree in child and family development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 5930/7930. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in human development programs with employed persons with a degree in Child and Family Development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 5940/7940. Internship in Child and Family Development. 1-12 hours.

Prerequisite: Permission of department.

Supervised professional practice in special needs programs with employed persons with a degree in Child and Family Development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 5950/7950. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in administrative programs with employed persons with a degree in Child and Family Development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 5960/7960. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: CHFD 5900/7900 and permission of department.

Supervised professional practice in Child Life programs with employed persons with a degree in Child and Family Development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 6100. Theories of Human Development. 3 hours.

Prerequisite: Permission of department.

Theoretical and historical perspectives used in the study of human development across the lifespan. Offered fall semester.

CHFD 6110. Issues in Human Development. 3 hours.

Prerequisite: Permission of department.

Integration of classic and current research literature on human development across the life span. Offered spring semester.

CHFD 6630. Theories of Family Relationships. 3 hours.

Prerequisite: Permission of department.

Theoretical and philosophical perspectives used in the study of families. Offered fall semester.

CHFD 6640. Issues in Family Relationships. 3 hours.

Not open to students with credit in CHFD(SOCI) 4610/6610.

Prerequisite: Permission of department.

Integration of classic and current research literature on families from an ecological, life-span perspective. Offered spring semester.

CHFD 6800. Research Methods. 3 hours.

Prerequisite: Permission of department.

Research design in selected areas of family and consumer sciences. Emphasis on common problems incurred in measurement and data analysis. Offered spring semester.

CHFD 7000. Master's Research. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CHFD 7010. Directed Study in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Directed reading and/or research under supervision of the instructor. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

CHFD 7210. Problems in Child and Family Development. 3 hours.

Prerequisite: Permission of department.

Individual guidance in the development of a significant project related to the student's field of work. Written report of problem or project required. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

CHFD 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

CHFD 7970. Interdisciplinary Collaboration in the Context of Disability. 3 hours.

Prerequisite: Permission of department.

The support of individuals with disabilities and their families through team-oriented collaboration. Team models, organizational aspects of teams, individual roles and attitudes, interpersonal factors, individual and group diversity, and leadership are addressed in relation to successful collaboration. Offered spring semester.

CHFD 7980. Foundations of Early Intervention with Children Birth to Age Three. 3 hours.

Prerequisite: Permission of department.

Historical and theoretical perspectives on intervention with children and disabilities from birth to age three. Addresses the impact of disability risk factors on children in relation to typical development norms and stresses challenges to culturally-sensitive intervention strategies, assessment, parent/program consultation, and interagency coordination. Offered spring semester.

CHFD 7990. Working with Families in Early Intervention. 3 hours.

Prerequisite: Permission of department.

Seminar on values, policies, and strategies that promote successful intervention with families of children with disabilities. Family diversity, family assessment, parent-professional partnerships, family service coordination, and family-focused interagency interaction are addressed in relation to family roles, structure, and process. Offered fall semester.

CHFD 8050. Family Systems Theory. 3 hours.

Prerequisite: Permission of department.

Experience in marriage and family therapy through observation of healthy marital/family systems. Structured experiences to develop skills in interviewing, assessing couple/family functioning, making limited therapeutic interventions, observing couple/family interaction, and developing basic aspects of the client-therapist relationship. Offered fall semester of even-numbered years.

CHFD 8060. Principles of Marital and Family Therapy I. 3 hours.

Prerequisite: Permission of department.

Principles, theoretical approaches, specific objectives, and techniques currently used in marriage and family therapy. The focus will be on normal developmental problems rather than on psychopathology. Offered fall semester of odd-numbered years.

CHFD 8070. Principles of Marital and Family Therapy II. 3 hours.

Prerequisite: Permission of department.

Additional principles, theoretical approaches, specific objectives, and techniques currently used in marriage and family therapy. The focus will be on normal developmental problems rather than

on psychopathology. Offered spring semester of odd-numbered years.

CHFD 8080. Marriage and Family Assessment. 3 hours.

Prerequisite: CHFD 8700.

Observational and self-report measures used to assess aspects of marriage and family life with emphasis on reliability, validity, and theoretical issues. Application in educational and clinical settings emphasized. Offered spring semester of even-numbered years.

CHFD 8090. Research Methods in Marriage and Family Intervention. 3 hours.

Prerequisite: Permission of department.

Quantitative and qualitative research designs used to study the process and outcome of marriage and family interventions. Not offered on a regular basis.

CHFD 8700. Philosophy of Science in Child and Family Development. 3 hours.

Prerequisite: Permission of department.

Integration of literature on history and philosophy of science as it pertains to the study of human development and families across the life span. Offered fall semester.

CHFD 8710. Principles of Life-Span Human Development. 3 hours.

Prerequisite: CHFD 8700.

Integration of theoretical and research literature as it pertains to study of human development over the life span with an emphasis on contextual-systemic approaches to family and individual development. Offered spring semester.

CHFD 8720. Ecological Perspective on Individual and Family Diversity. 3 hours.

Prerequisite: CHFD 8700.

Theoretical, historical, and philosophical perspectives on diversity and similarity in individual and family development. Considers transactions among families and individuals and other significant contexts as moderated by diversity. Emphasizes implications for service delivery, treatment, policy, and marriage and family therapy. Offered spring semester.

CHFD 8800. Quantitative Methods in Child and Family Development. 4 hours.

Prerequisite: Permission of department.

Quantitative research processes, conceptualization of research problems, research designs, selection of appropriate methods of data collection, consideration of alternative data analysis strategies, interpretation of findings, and research writing. Research on marital and family therapy included. Offered fall semester.

CHFD 8810. Qualitative Methods in Child and Family Development. 4 hours.

Prerequisite: Permission of department.

Qualitative research processes, conceptualization of research problems, research design, selection of appropriate methods of data collection, consideration of alternative data analysis strategies, interpretation of findings, and research writing. Research in marital and family therapy included. Offered spring semester.

CHFD 8820. Evaluation Methods in Child and Family Development. 3 hours.

Prerequisite: Permission of department.

Evaluation research processes; prevention/intervention settings; research problems; research designs; selection of appropriate methods of data collection; alternative data analysis strategies, including measurement of change; interpretation of findings; and research/evaluation report writing. Research in marital and family therapy included. Offered spring semester.

CHFD 8910. Current Research and Issues in Child and Family Development. 1-2 hours. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Current research of faculty, graduate students, and visiting scholars. Discussion of current issues pertaining to child and family development. Offered fall and spring semesters.

CHFD 8920. Behavior Problems in Children. 3 hours.

Prerequisite: Permission of department.

Children's adjustment to their environment. Causes, treatment, and prevention of behavior problems considered. Case materials utilized. Non-Traditional Format: Research problems in the field will be carried out by students. Not offered on a regular basis.

CHFD 8950. Seminar in Child and Family Development. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Current literature on selected areas in child and family development; discussion of current research trends; reports and discussion on selected topics; completion of review of empirical research paper. Offered fall and spring semesters.

CHFD 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

CHFD 9010. Directed Study in Family and Child Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study and/or research under supervision of an instructor. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

CHFD 9070. Practicum in Marriage and Family Therapy. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised experience in marriage and family therapy. Non-Traditional Format: Practicum. Offered fall and spring semesters.

CHFD 9080. Supervision of Marriage and Family Therapy. 3 hours. Two lectures and three 1-hour lab periods.

Prerequisite: Permission of department.

Methods of supervision in marriage and family therapy. Offered spring semester of even-numbered years.

CHFD 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

CHFD 9900. Preinternship Orientation. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Orientation and preparation for doing a doctoral level internship. Non-Traditional Format: Preinternship course with seminar style. Offered fall, spring, and summer semesters.

CHFD 9910. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in off-campus settings with employed persons with a degree in child and family development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

CHFD 9920. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in on-campus settings with employed persons with a degree in child and family development or related field. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

Foods and Nutrition

Roy J. Martin, *Head*
Mary Ann Johnson, *Graduate Coordinator*,
542-2292
(Dawson Hall)

The objectives of the MS and PhD programs are to prepare students to function as nutrition professionals, to meet changing needs of society and industry, and to generate scholarly work in the areas of foods and nutrition. Graduates are placed in research positions with universities, medical schools, federal laboratories, and industry. The primary emphasis of the program is the scientific basis for diversity in the human needs for foods and nutrients, the metabolic responses to dietary change, and the interactions among genetics, nutrients and food consumption patterns on human health and well-being. The Preprofessional Practice Program (AP4) equips students with the skills needed to become a Registered Dietitian.

FDNS 4050/6050. Optimal Nutrition for the Life Span. 3 hours.

Not open to students with credit in FDNS 4510/6510.

Prerequisite: FDNS 2100.

Nutritional needs of infants, young children, adolescents, pregnant and lactating women, and middle-aged and elderly people. Offered every year on a regular basis.

FDNS 4100/6100. Micronutrient Nutrition. 4 hours.

Prerequisite: FDNS 3100.

Human needs for vitamins, minerals, and electrolytes with emphasis on biochemistry, physiology, epidemiology, food sources, and their role in performance under varying conditions of age and health. Offered fall semester.

FDNS 4510/6510. Nutrition Related to the Human Life Cycle. 3 hours.

Prerequisite: FDNS 3100.

Nutritional health needs related to specific stages of the human life cycle. Special emphasis will be given to physiological changes and nutrition needs during pregnancy, lactation, infancy, childhood, adolescence, and adulthood. Offered fall semester.

FDNS 4520/6520. Dietetic Practice and Nutrition Support. 2 hours.

Corequisite: FDNS 4530/6530.

Specialized nutrition practice in the clinical setting including nutrition assessment, enteral and parenteral nutrition, and nutrition care documentation. Offered on a regular basis.

FDNS 4530/6530. Medical Nutrition Therapy. 4 hours.

Prerequisite: FDNS 4100/6100.

Diet modifications for disease prevention and treatment. Special emphasis is given to the study of gastrointestinal disease and metabolic, cardiovascular, and renal disorders. Offered spring semester.

FDNS 4540/6540. Public Health Dietetics. 3 hours.

Prerequisite: FDNS 4050/6050 or FDNS 4510/6510.

Nutrition in public health care and tools for successful management and delivery of nutrition services, including knowledge of community assessment, planning, implementation, and evaluation as related to nutritional care. Offered spring semester.

FDNS 4550/6550. Nutritional Biodynamics. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDNS 3100.

Nutrients as precursors for organ and cell components and energy stores, emphasizing processes of turnover, growth, biosynthesis, and metabolism. Students will explore quantitative and dynamic issues using interactive computer modeling. Offered fall semester.

FDNS 4560/6560. Nutrition and Aging. 3 hours.

Prerequisite: (FDNS 3100 or FDNS 4050/6050) and (CBIO 2210-2210L or VPHY 3100).

Foods and nutrients in the health and well-being of the elderly; effects of aging on macro and micronutrient needs; influence of disease, medications, economics, and culture; nutritional assessment, support, and services; health promotion and disease prevention; future directions for research. Not offered on a regular basis.

FDNS 4600/6600. Food and the Consumer. 3 hours.

Prerequisite: FDNS 3600-3600L.

Health, safety, and policy issues related to food consumption trends; nutrient composition of foods, food additives, food allergies and hypersensitivities, naturally occurring toxins, pathogens, pesticides, biotechnology-derived foods, irradiated foods, and food laws and regulations. Offered spring semester.

FDNS 4610/6610. Foodservice Procurement and Financial Management. 2 hours.

Prerequisite: FDNS 3610-3610L.

Purchasing methods, specifications, storage and issuing procedures, inventory systems. Cost con-

trol, budgets, and financial statements used in foodservice organizations. Offered fall semester.

FDNS 4620/6620. Management of Foodservice Organizations. 3 hours.

Prerequisite: FDNS 4610/6610.

Management, staffing, and delivery systems as they pertain to the resources and organization of public and private foodservice institutions. Offered spring semester.

FDNS 4630/6630. Cultural Aspects of Foods and Nutrition. 3 hours.

Prerequisite: FDNS 2100 and FDNS 3600-3600L.

Foodways, food habits, and food-related behavior of various population groups and their influences on the nutritional status of group members. Offered fall semester.

FDNS 4640/6640. Food Sanitation and Safety. 3 hours.

Prerequisite: FDNS 3600-3600L.

Safe food handling for foodservice and the consumer, with emphasis on causes and prevention of foodborne illness. Offered fall semester.

FDNS 4650/6650. Experimental Study of Food. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: (FDNS 2100 and FDNS 3600-3600L and STAT 2000) or permission of department.

Prerequisite or corequisite: CHEM 2200 and CHEM 2200L.

Functional and nutritional properties of components in food products; techniques to evaluate food products for consumer acceptability including individual and group laboratory experimentation; computer applications. Offered spring semester.

FDNS 4660/6660. Delivery Systems for Food and Nutrition Information. 3 hours.

Prerequisite: FDNS 2100 and FDNS 3600-3600L and one course in Speech.

Transfer of food and nutrition information to consumers using various media. Not offered on a regular basis.

FDNS 4710/6710-4710L/6710L. Catering. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDNS 3610-3610L or permission of department.

Types of catering; establishing catering businesses; principles and practice of menu planning, work planning, food preparation, styles of service, cost accounting, and resource management. Not offered on a regular basis.

FDNS 4720/6720. Menu Management and Service. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Meal planning and service styles for individuals, families, and institutions; cultural, nutritional, mar-

keting, and social aspects of foods; government regulations related to meal planning. Not offered on a regular basis.

FDNS 4730/6730. Food Sales and Service. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Effective sales and service techniques; market research and strategies specific to the foodservice industry. Not offered on a regular basis.

FDNS 4740/6740. Food Service Facilities Planning and Development. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Concepts, strategies, and skills needed in planning, designing, and equipping food service facilities. Not offered on a regular basis.

FDNS 4750/6750. Foodservice Cost Controls and Systems. 3 hours.

Prerequisite: FDNS 4620/6620 or permission of department.

Cost control and accounting principles for the foodservice industry; manual and computer information systems for foodservice inventory and cost control. Not offered on a regular basis.

FDNS 5910/7910. Foods and Nutrition Internship. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: FDNS 2100 and FDNS 3600-3600L and permission of department.

Supervised experience in dietetics, foodservice management, or a foods and nutrition related industry. Non-Traditional Format: Supervised practice experience only. Variable hours. Offered fall, spring, and summer semesters.

FDNS 6400. Advanced Macronutrients. 4 hours.

Prerequisite: FDNS 3100 and VPHY 3100.

Literature of human nutrition related to macronutrients; includes metabolism, genetics, physiology, biochemistry, endocrinology, and epidemiology. Offered fall semester.

FDNS 6580. Graduate Special Topics in Foods and Nutrition. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FDNS 4100/6100 or FDNS 6400 or permission of department.

Selected topics from the field of foods and nutrition. Not offered on a regular basis.

FDNS 7000. Master's Research. 1-12 hours. Repeatable for maximum 35 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FDNS 7010. Directed Research in Foods and Nutrition. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Individual guidance in the development of a research project. A written report of the problem or project will be required. Non-Traditional Format: Directed research. Offered fall, spring, and summer semesters.

FDNS 7300. Master's Thesis. 1-12 hours. Repeatable for maximum 35 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

FDNS 7930. Consumer Foods Internship. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Work in a public or private institution to obtain practical professional experience. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

FDNS 8510. Metabolic Controls in Nutrition. 3 hours.

Prerequisite: [FDNS 6400 and BCMB 4020/6020] or permission of department.

Regulatory mechanisms of nutrition and metabolism, including current genetic theories on metabolic controls and their dysfunction in human health. Offered spring semester of even-numbered years.

FDNS 8520. Nutritional Aspects of Growth and Development. 3 hours.

Prerequisite: [FDNS 4100/6100 and FDNS 6400 and BCMB 4020/6020] or permission of department.

Tissue and cellular development during prenatal and neonatal periods of growth, including current concepts of nutritional and hormonal regulation of cellular proliferation and differentiation. Offered spring semester of odd-numbered years.

FDNS 8530. Nutrition and Disease Processes. 3 hours.

Prerequisite: [FDNS 4100/6100 and FDNS 6400] or permission of department.

Epidemiological, clinical, animal, and cellular studies linking diet and diseases such as cancer, heart disease, and osteoporosis. Mechanisms by which nutrients prevent disease. Offered fall semester of even-numbered years.

FDNS 8540. Mineral Nutrition and Human Health. 3 hours.

Prerequisite: FDNS 4100/6100 and FDNS 6400.

Literature on human mineral nutrition, including molecular biology, physiology, and epidemiology, with special emphasis on the role of minerals in optimal health. Not offered on a regular basis.

FDNS 8560. Dissertation/Thesis Proposal Writing. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Proposal preparation and presentation for planning thesis/dissertation research. Offered spring semester.

FDNS 8580. Special Topics in Foods and Nutrition. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: (FDNS 6400 and BCMB 4010/6010) or permission of department.

Recent developments in the field of foods and nutrition. Not offered on a regular basis.

FDNS 8900. Seminar in Foods and Nutrition. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Literature on selected topics in foods and nutrition. Offered fall and spring semesters.

FDNS 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 35 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FDNS 9010. Directed Research in Foods and Nutrition. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study and/or research under supervision of a faculty member. No more than six hours may be counted toward master's degree requirements. Non-Traditional Format: Directed research. Offered fall, spring, and summer semesters.

FDNS 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 35 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Housing and Consumer Economics

Anne Sweaney, *Acting Head*
 Julia Marlowe, *Graduate Coordinator*, 542-4856
 (Dawson Hall)

The MS program offers flexibility in selecting coursework to meet a variety of career goals in either housing or consumer economics. The PhD program provides students with the opportunity to pursue scholarly activities by providing a thorough acquaintance with consumer economics or housing policy, quantitative methods in applied economics, research methods and statistics. Students take core courses in the department and supporting coursework in statistics and related area(s) outside the department.

HACE 4100/6100. Family Economic Behavior and Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 3150.

The family as an income producing and time allocating unit. Theory and applications of the economics of household decision making. The family as the supplier and demander of economic inputs and outputs. The interrelationship between demographic and economic family characteristics and well-being. Offered spring semester.

HACE 4200/6200. Advanced Family Financial Management. 3 hours.

Prerequisite: Undergraduate level only: HACE 3200.

Personal income taxes, life insurance, disability insurance, liability insurance, savings and investment, retirement planning, and estate planning. Offered fall semester.

HACE 4300/6300. Advanced Housing Theories. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Sociological and economic theories of housing consumption and production in housing markets, including basic concepts of housing needs, quality, norms and satisfaction. Economic theories relating to characteristics of housing and capital markets, including primary and secondary mort-

gage markets and alternative financing. Offered fall semester.

HACE 4310/6310. Housing Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Housing policies at the federal, state, and local levels as they relate to current housing markets. Barriers and incentives for housing development activities created by regulations, finance, and taxation. The role of public/private initiatives in the provision of housing. Offered fall semester.

HACE 4350/6350. Household Technology and Systems. 3 hours. Two lectures and one 2-hour lab period.

Technological devices and their use within the household, including mechanical and electrical systems, home automation, universal design, regulation, and national appliance standards. Offered spring semester.

HACE 4400/6400. Family Demographics and Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 2100 or SOCI 1101.

Basic concepts and measurement issues of family demography, including migration, income, marriage, and divorce; implications of family structural characteristics for public policies. Offered fall semester.

(HACE)CHFD 4500/6500. Second Half of Life. 3 hours.

Prerequisite: Junior standing or permission of department.

Second half of life; resource management, living patterns, and housing, sexuality, roles, family relationships, community and organization involvement, and career opportunities. Offered spring semester of odd-numbered years.

HACE 4900/6900. Seminar in Housing and Consumer Economics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Selected topics and problems in housing and consumer economics. Not offered on a regular basis.

HACE 5100/7100. Consumer Protection. 3 hours.

Prerequisite: Undergraduate level only: HACE 3150.

Consumer rights and responsibilities in the private and public sector of the economy. Relationship of government, nonprofit, and corporate response to consumer problems, legislation concerning consumer information, product safety, and choice of goods and channels of appeal for the consumer. Offered fall semester.

HACE 5150/7150. Consumers' Market Environment. 3 hours.

Prerequisite: Undergraduate level only: HACE 3100 and HACE 3150.

The consumer marketplace in terms of the welfare of the consumer. Actions of consumers with changing marketplace, institutions, and government policies. Offered spring semester.

HACE 5200/7200. Family Financial Counseling. 3 hours.

Prerequisite: Undergraduate level only: HACE 3200.

Indicators, causes, and impact of family financial problems on the family's well-being. Topics covered include credit difficulties, repossessions, liens, garnishments, and bankruptcy. Non-Traditional Format: Students are required to work on a regular basis with families in financial difficulty. Offered fall semester.

HACE 5250/7250. Family Financial Planning. 3 hours.

Prerequisite: HACE 4200/6200.

Advanced financial topics and development of a comprehensive financial plan. Regulation, certification, and legal and ethical requirements for financial planners. Offered spring semester.

HACE 5350/7350. Housing Counseling. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Basic information for certification as a Professional Housing Counselor. Includes basic techniques for housing, budget, and tenancy counseling. Offered spring and summer semesters.

HACE 5710/7710. Study Tour in Housing and Consumer Economics. 3-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Topics relating to housing or consumer economics, with site visits to relevant locations. Combines in-depth study with first-hand experience gained on site. Non-Traditional Format: Lecture, tour, and other activities for the length of the program. Not offered on a regular basis.

HACE 5900/7900. Professional Seminar and Internship Orientation. 1 hour.

Orientation to an internship experience. Offered fall, spring, and summer semesters.

HACE 5910/7910. Housing and Consumer Economics Internship. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Supervised work experience in housing, consumer economics, or consumer journalism. Non-Traditional Format: Internship. Offered fall, spring, and summer semesters.

HACE 7000. Master's Research. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

HACE 7010. Directed Study in Housing and Consumer Economics. 3-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Directed study on masters research in housing and consumer economics. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

HACE 7300. Master's Thesis. 3-18 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

HACE 8000. Research Methods in Housing and Consumer Economics I. 3 hours.

Research design. Emphasis on common problems incurred in measurement and data analysis in housing and consumer economics. Offered fall semester.

HACE 8050. Research Methods in Housing and Consumer Economics II. 3 hours.

Prerequisite: HACE 8000 and permission of department.

Advanced research methods. Integration of research design, measurement, and data analysis. Preparing a research proposal on topics in housing and consumer economics. Offered spring semester.

HACE 8100. Theory of Households and Markets I. 3 hours.

Contemporary theories of consumer and household decision making. Includes neoclassical economic analysis, the household production model, information costs, and related material. Offered fall semester.

HACE 8150. Theory of Households and Markets II. 3 hours.

Prerequisite: HACE 8100.

A continuation of Theory of Households and Markets I. Emphasis on application, extension, and integration. Offered spring semester.

HACE 8200. Family Financial Analysis. 3 hours.

Prerequisite: HACE 8150 or permission of department.

Family financial decision making over the life cycle. Advanced techniques in present and future value analysis. Economics of saving and borrow-

ing, insurance and risk management, and retirement and estate planning. Effects of public policy on household financial decisions, and the interrelationship between family finance and the labor market. Offered fall semester of even-numbered years.

HACE 8300. Housing Theories, Research, and Policies. 3 hours.

Theoretical and empirical housing models and concepts. Building on previous research, the student will develop and test his/her own conceptual model. Offered fall semester of even-numbered years.

HACE 8400. Demographics and Policy. 3 hours.

Prerequisite: Permission of department.

Application of demographic data in the development of public policy. Includes changes in family status, aging, rural to urban migration, and economic development. Offered spring semester.

HACE 8900. Seminar in Housing and Consumer Economics. 3-9 hours. Repeatable for maximum 9 hours credit.

Selected topics in housing and consumer economics. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall semester of odd-numbered years.

HACE 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

HACE 9010. Directed Study in Housing and Consumer Economics. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Directed study in housing and consumer economics. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

HACE 9100. Consumer Policies and Programs. 3 hours.

Prerequisite: HACE 8150.

Public policies and programs relating to consumers in the market. Policies promoting consumer information and protection, as well as service-provision programs are explored in terms of benefit/cost relationships. Offered spring semester of odd-numbered years.

HACE 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral

dissertation. Offered fall, spring, and summer semesters.

Textiles, Merchandising, and Interiors

Ian R. Hardin, *Head*

Helen H. Epps, *Graduate Coordinator,*

542-4913

(Dawson Hall)

Graduate programs are directed toward preparation of professionals for careers in industry, government, business and academia. Two degrees are offered: the MS degree in Textiles, Merchandising and Interiors; and the PhD degree in Textile Sciences. Both are research degrees that culminate in a thesis (MS) or dissertation (PhD) Focus areas for the MS degree are dyeing and finishing, polymers and fibers, testing and analysis, environmental, merchandising, historic, and international trade. Major emphasis areas for the PhD degree are textile chemical processes, textile analysis, and textile products and standards.

TXMI 4100/6100. Advanced Textiles. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Fibers and finishes; emphasis on man-made fibers, new fiber, and finish developments and technology. Offered fall semester.

TXMI 4110/6110. Textile Dyeing. 3 hours.

Prerequisite: TXMI 3500 and TXMI 3500L and permission of department.

Textile dyeing processes with emphasis on fiber-dye association. Analysis of dyeing techniques and properties of dyes and dyed materials. Offered spring semester.

TXMI 4120/6120. Product Standards and Quality Analysis. 3 hours.

Prerequisite: (STAT 2000 and TXMI 3520) or permission of department.

Developing, maintaining, and assessing product standards from the initial design process to end uses of textile and apparel products. Quality assurance and certification programs; governmental regulations; statistical analysis and control of benefits offered through standards. Offered fall semester.

TXMI 4130/6130. Chemical and Instrumental Analysis of Polymers and Textiles. 3 hours.

Prerequisite: TXMI 3520 and TXMI 4100/6100 and CHEM 2410 and CHEM 2410L.

Theory and application of instrumental analysis to polymers, fibers, fabrics, dyes, and finishes. Offered spring semester.

TXMI 4140/6140. Textile Finishing Processes. 3 hours.

Prerequisite: TXMI 3520 and TXMI 4100/6100.

Theory, application, evaluation, and identification of textile finishes and textile auxiliary processes. Examination of the role of finishing and types of finishes used in manufacturing fibers, yarns, and fabrics. Offered fall semester.

TXMI 4150/6150. Nonwovens Science and Technology. 3 hours.

Prerequisite: TXMI 4100/6100 and permission of department.

Manufacture and conversion of nonwoven webs with examination of interrelationships involving raw materials, bonding systems, manufacturing processes, product properties, and end uses. Offered fall semester of odd-numbered years.

TXMI 4230/6230. Clothing and Human Behavior. 3 hours.

Prerequisite: PSYC 1101 or SOCI 1101.

The study of clothing with particular emphasis on psychological, sociological, and economic aspects of clothing. Offered fall semester.

TXMI(DRAM) 4270/6270. History of Costume: Antiquity to Nineteenth Century. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Interrelationships of costume and social, cultural, political, and economic environments from antiquity to the nineteenth century. Offered fall semester of odd-numbered years.

TXMI 4290/6290. History of Costume from the Nineteenth Century to Present. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Interrelationship of costume and social, cultural, political, and economic environments from the nineteenth century to present day. Offered spring semester.

TXMI 4330/6330. American Interiors and Furnishings. 3 hours.

American interior design and furnishings from the seventeenth to the twentieth centuries. Identification of styles as well as social, cultural, and historic influences. Offered spring semester.

TXMI 4340/6340. Historic Interior Materials. 3 hours.

Prerequisite: TXMI 4330/6330 or permission of department.

Ceiling, wall, and floor coverings, window treatments, upholstery, and lighting in historic Ameri-

can interior design, with emphasis on analysis and selection. Offered spring semester of even-numbered years.

TXMI 4350/6350. Historical Homes and Furnishings. 3 hours.

Prerequisite: [TXMI 3350 and ARST 2000] or permission of department.

The architecture, interiors, and furnishings in the western world from the ancient Egyptian era through 1850. Offered fall semester.

TXMI 4360/6360. Decorative Accessories for the Home. 3 hours.

Prerequisite: TXMI 3350 or permission of department.

Historical and cultural development of accessories used in the home including ceramics, metals, and textiles. Design and characteristics of materials in these accessories will be covered. Offered fall semester.

TXMI 4370/6370. Contemporary Homes and Furnishings. 3 hours.

Prerequisite: (TXMI 3350 and ARST 2000) or permission of department.

Contemporary developments in architecture, interiors, and furniture from 1850 to the present day. Offered fall semester.

TXMI 4380/6380. Interior Fabrics and Materials: Specifications and Estimations. 3 hours.

Prerequisite: (TXMI 3520 and senior standing) or permission of department.

Construction, fibers, and finishes for fabrics with emphasis on quality, durability, and utilization of current materials for soft floor coverings, window treatments, and upholstery. Estimations and specifications. Offered fall semester.

TXMI 4520/6520. Apparel and Textile Economics. 3 hours.

Prerequisite: [TXMI 3500 and TXMI 3500L and (ECON 2106 or ECON 2105)] or permission of department.

Organization and functions of apparel and textile industries. Factors related to production, distribution, and consumption of apparel and household textiles. Offered fall semester.

TXMI 4540/6540. International Textiles and Apparel: Asia. 3 hours.

Prerequisite: TXMI 3500 and TXMI 3500L.

Textile and apparel production and distribution in relation to the culture, politics, and policies of major textile and apparel industries in Asia. Emphasis placed on impact of global issues on marketability and availability of textile and apparel products. Offered fall semester of odd-numbered years.

TXMI 4580/6580. History of Textiles in Europe and America. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Textiles and the textile industry in prehistoric, ancient, medieval, and modern eras, with special emphasis on Western European and American textiles. Offered fall semester of even-numbered years.

TXMI 5240/7240. Retailing Apparel and Textiles. 3 hours.

Prerequisite: MARK 3000 or permission of department.

Retailing, retail organizational structures, merchandising, and organization of market resources in apparel and textiles. Emphasizes concepts applicable to the apparel and textile industry. Offered spring semester.

TXMI 5310/7310. Residential Interiors and Economic Resources. 3 hours.

Prerequisite: [TXMI 3380 and TXMI 4380/6380] or permission of department.

Residential space planning and selection of fabrics, finishes, and furnishings using specified amounts of economic resources. Offered fall semester.

TXMI 5320/7320. Residential Design Practices. 3 hours.

Prerequisite: Senior standing and permission of department.

Relationships between the designer, wholesaler, and retailer in the home furnishing industry. Designer and client relationships with emphasis on retailing practices and economic resources in the residential design firm. Offered fall semester.

TXMI 5710/7710. Study Tour in Textiles, Merchandising and Interiors. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

An on-location study of clothing, textiles, fashion merchandising, and residential interiors and furnishings. Includes lectures by recognized leaders in the fields; meetings with designers, manufacturers, merchants and field trips to designers' showrooms or studios, manufacturing plants, distribution centers, retail stores, and museums. Non-Traditional Format: Lecture, tour, and other activities for the length of the program. Not offered on a regular basis.

TXMI 6250. Apparel Theories and Methodologies. 3 hours.

Prerequisite: TXMI 4230/6230 and permission of department.

Theories and methods in apparel research: retailing, fashion, cultural, and historical. Offered fall semester of even-numbered years.

TXMI 6260. Apparel Trade and International Retailing. 3 hours.

Economic aspects of apparel and textile trade and international retailing practices. Trade policies, comparative advantages, and global issues that affect apparel and textile trade and retailing

are examined. Offered fall semester of odd-numbered years.

TXMI 7000. Master's Research. 1-12 hours. Repeatable for maximum 33 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

TXMI 7300. Master's Thesis. 1-12 hours. Repeatable for maximum 33 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

TXMI 8050. Textiles, Merchandising and Interiors Research Methods. 3 hours.

The philosophy of research applicable to clothing, textile, and interiors studies; methodology and interpretation of research literature. Offered spring semester.

TXMI 8110-8110L. Physical Analysis of Textiles. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: TXMI 4100/6100 and permission of department.

The physical properties of textiles important for quality control and research. New techniques and instrumentation for physical analysis of textiles. Offered spring semester of even-numbered years.

TXMI 8120. Polymer Science. 3 hours.

Prerequisite: TXMI 4100/6100 and CHEM 2212 and CHEM 2212L.

The physics and chemistry of polymeric materials, including polymer property-structure relationships, polymer solution and rheology, polymerization, polymer reactions, and polymer characterization. Offered spring semester.

TXMI 8140. Environmental Aspects of Textiles. 3 hours.

Prerequisite: TXMI 4520/6520.

Environmental issues related to textile manufacturing. Examination of water, air, noise, and solid pollution controls and legislation and their impact on the textile industry. Offered spring semester of even-numbered years.

TXMI 8170. Color Science. 3 hours.

Prerequisite: [TXMI 3520 and MATH 2200 and MATH 2200L] or permission of department.

Development of color order systems and color theory in relation to color vision, light, and optics; problems in visual and instrumental color measurement of materials with emphasis on textile materials. Offered spring semester.

TXMI 8180. Physics of Textile Structures. 3 hours.

Prerequisite: [(TXMI 3520 and TXMI 4100/6100) and (PHYS 1111-1111L or PHYS 1211-1211L)] or permission of department.

Theoretical analysis of fine fiber structure, physical properties of yarns, fabric shear deformation and bending. Evaluation of interrelationships among fiber structure, yarn structure, fabric geometry, and fabric performance. Offered spring semester of even-numbered years.

TXMI 8190. Dyeing Theory. 3 hours.

Prerequisite: TXMI 4110/6110 or permission of department.

Textile dyeing, with emphasis on mathematical descriptions of equilibrium and kinetic processes of dye absorption. Offered spring semester of even-numbered years.

TXMI 8500. Contemporary Topics in Textiles, Merchandising and Interiors. 2 hours.

Prerequisite: Permission of department.

Current specialized topics in textiles, clothing, and furnishings. Focus on economic, environmental, and social factors related to textiles, clothing, and furnishings. Not offered on a regular basis.

TXMI 8900. Textiles, Merchandising and Interiors Seminar. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Research and theory in clothing, textiles, and furnishings. Intensive reading and discussion of se-

lected topics to be presented by advanced students, faculty, and guest speakers. Offered fall semester.

TXMI 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

TXMI 9010. Direct Research. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study and/or research under supervision of an instructor. Offered fall, spring, and summer semesters.

TXMI 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

The Daniel B. Warnell School of Forest Resources

Arnett C. Mace, Jr., *Dean*

Robert O. Teskey, *Graduate Coordinator,*

542-1183

(*Forest Resources Building*)

Graduate study opportunities in the School of Forest Resources encompass numerous disciplines needed to understand and effectively manage renewable natural resources. Graduate training and research are conducted in the general areas of forest biology and silviculture, forest business management, forest biometrics and management, forest soils, hydrology and environmental systems, forest resource economics and policy, wildlife ecology and management, fisheries and aquaculture and forest products.

Excellent facilities are available for graduate study and research. The School of Forest Resources is housed in a complex of four buildings, two of which are devoted primarily to graduate education and research. In addition, two modern U.S. Forest Service research laboratories, located adjacent to the School, provide excellent opportunities for cooperative research in silviculture and wood utilization. The Department of the Interior, U. S. Fish and Wildlife Service, also maintains a Cooperative Fishery and Wildlife Unit in association with the School of Forest Resources, as well as a Migratory Bird Unit and an Environmental Contaminant Evaluation Field Station.

Students with baccalaureate degrees in related fields may be accepted for graduate study in the School of Forest Resources if qualified.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

FORS 4000/6000-4000L/6000L. Forest Soil Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L.

Corequisite: FORS 4010-4010L.

Morphological, physical, and chemical soil properties affecting tree growth and forest productivity; evaluation of soils and site quality; preparation of forest sites for planting, diagnosis, and correction of nutrient limitations; use of forest soil systems for waste treatment. Non-Traditional Format: One Friday and one Friday-Saturday field trip are required. Offered spring semester.

FORS 4020/6020. Genetics and Breeding of Forest Trees. 3 hours.

Prerequisite: BIOL 1108-1108L.

Genetic variation in forest trees; harnessing natural variation and creating new variation to meet breeding objectives; biological and economic consequences of tree domestication; conservation of genetic resources. Offered spring semester.

FORS 4030/6030. Regional Silviculture. 3 hours.

Prerequisite: FORS 4010-4010L.

Identification of the major forest regions of the United States and discussion of their silvicultural management. Offered fall semester.

FORS 4060/6060-4060L/6060L. Field Ornithology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: ECOL(FORS) 3260-3260L.

Bird identification, also emphasizing ecology, evolution, behavior, and field techniques. Non-Traditional Format: Overnight field trip required. Offered spring semester of odd-numbered years.

FORS 4110/6110. Forest Hydrology. 3 hours.

Prerequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Multidisciplinary examination of the terrestrial components of the hydrologic cycle focusing on the qualitative analysis of precipitation, snowmelt, runoff generation, routing, infiltration, and subsurface flow and transport. Emphasis is on the definition of hydrologic processes, identification of hydrologic resources, development of environmental monitoring techniques, and application to hydrologic resources management. Offered spring semester.

FORS 4120/6120. Quantitative Methods in Hydrology. 3 hours.

Prerequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Advanced analysis of hydrologic processes to provide a theoretical understanding of precipitation, evapotranspiration, streamflow, groundwater occurrence and movement, and soil zone flow and transport. Emphasis is upon quantitative methods used in conjunction with field and laboratory data to identify flow and transport dynamics in hydrologic systems. Offered fall semester.

FORS 4130L/6130L. Field Methods in Hydrology. 2 hours. Two 2-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L.

Field data acquisition methods to hydrologic systems are used to determine precipitation quantity and quality, evapotranspiration, streamflow, groundwater occurrence and movement, and soil zone transport processes. Physical and chemical measurements are coupled to determine flow paths, mass balances, and the environmental fate of solutes. Offered spring semester.

FORS 4160/6160-4160L/6160L. Environmental Monitoring. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CRSS(FORS) 3060-3060L and STAT 2000.

Design, implementation, and interpretation of sampling programs for environmental systems (especially aquatic systems) for monitoring, regulatory activities, quality control, scientific study, and impact assessment. Offered fall semester.

FORS 4300/6300-4300L/6300L. Management of Wildlife Habitat. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: [FORS 3020-3020L and FORS 3300] or permission of school.

Principles and practices related to the management of forested ecosystems for wildlife and biological diversity, with emphasis on habitat management at the stand and landscape level. Habitat management through use of appropriate silvicultural practices, wildlife enhancement techniques, and regulations is evaluated. Offered fall semester.

(FORS)ECOL 4310/6310-4310L/6310L. Limnology. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or FORS 3300.

Aquatic ecosystems (lakes and streams) and their biota. Linkages between terrestrial and aquatic ecosystems. Offered fall semester.

FORS 4320/6320. Wildlife Physiology and Nutrition. 3 hours.

Prerequisite or corequisite: FORS 3300 or permission of school.

An advanced course relating animal physiology and nutrition to wildlife ecology and management. Offered fall semester.

FORS 4330/6330-4330L/6330L. Water Quality Management in Fisheries and Aquaculture. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L.

Chemical and biological aspects of water quality, with emphasis upon relationships between water quality and fish production. Practical information on water quality management and related fields. Offered fall semester.

FORS 4340/6340. Endangered Species Management. 3 hours.

Prerequisite: FORS(ECOL) 3580-3580L or FORS 3010-3010L or BTNY 4650/6650-4650L/6650L or permission of school.

Factors affecting extinctions and declines in biodiversity, including laws, policies, and management activities designed to protect species and critical habitats. Offered fall semester of even-numbered years.

FORS 4370/6370-4370L/6370L. Fish Physiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ECOL(FORS) 3260-3260L or permission of school.

Basic fish physiology with an emphasis on the effects of environmental stresses on physiological functions of fish. Offered spring semester.

(FORS)MARS 4380/6380-4380L/6380L. Marine Fisheries Biology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L and permission of department.

Interaction of oceanographic processes with the life histories and productivity of marine fisheries species, and the human interactions with major marine fisheries. Offered spring semester.

FORS 4570L/6570L. Practical Wood Identification. 2 hours. Two 2-hour lab periods.

Identification of domestic and commercial tropical woods. Offered spring semester.

FORS 4610/6610-4610L/6610L. Forest Mensuration. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 3000-3000L and FORS 3610-3610L.

Direct measurement and indirect estimation of primary and secondary forest products. Measures of stand productivity, density, and growth. Offered fall and spring semesters.

FORS 4620/6620. Timber Management. 3 hours.

Prerequisite: FORS 4610/6610-4610L/6610L.

Organization and management of forest properties for the production of commercial forest products. Offered fall and spring semesters.

FORS 4630L/6630L. Computational Methods and Computer Models in Forestry. 2 hours. Two 2-hour lab periods.

Prerequisite: FORS 4610/6610-4610L/6610L. Spreadsheets and forestry software packages to solve inventory and growth prediction problems. Offered fall semester.

FORS 4640/6640-4640L/6640L. Forest Inventory. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 4610/6610-4610L/6610L. Planning forest inventories and comparison of various equal and unequal probability sampling concepts; permanent and temporary forest sampling procedures; current stand and future growth estimation principles. Offered spring semester.

FORS 4710/6710-4710L/6710L. Quantitative Decision Methods for Forest Management. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: FORS 3610-3610L and FORS 3710-3710D.

Analysis methods applicable to forest management planning and decision making in forestry. Particular emphasis on optimization procedures and financial analysis. Offered fall and spring semesters.

FORS 4800/6800-4800D/6800D. Forest Resources Policy. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: FORS 3710-3710D or permission of school.

Forest policy as a process, establishing forestry agendas, political decision models, political institutions and interest groups, policy in organizations, current issues. Offered fall and spring semesters.

FORS 4900/6900-4900L/6900L. Wildlife Damage Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FORS 3300 or FORS(ECOL) 3580-3580L or permission of school.

Theory and practice of assessing and controlling damage done by wild and feral vertebrate animals, especially mammals and birds. Emphasis is on protecting agricultural and forest crops and property. Offered spring semester.

FORS 5010/7010. Urban Tree Management. 3 hours.

Prerequisite: BTNY 1210-1210L or BIOL 1104-1104L or BIOL 1108-1108L.

Establishment and maintenance of trees in urban environments. Nature and benefits of trees, planting, and soil management; pruning, repair, and protection; stress management; values of urban trees. Offered spring semester.

FORS 5310/7310-5310L/7310L. Techniques in Wildlife Population Management. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: [FORS(ECOL) 3580-3580L and PGEN 3580-3580L] or permission of school. Field and laboratory methods commonly used by professional wildlife ecologists to analyze and manipulate animal populations. Offered spring semester.

FORS 5360/7360-5360L/7360L. Fisheries Management. 3 hours. Two lectures and one 4-hour lab period.

Prerequisite: BIOL 1108-1108L. Principles, methods, and techniques used in the management of freshwater and marine fisheries resources. Practical, theoretical, and ethical questions are addressed. Offered fall semester.

FORS 5380/7380-5380L/7380L. Fish Culture. 3 hours. Two lectures and one 4-hour lab period.

Prerequisite: BIOL 1108-1108L.

Biological and abiological aspects of extensive and intensive culture of freshwater fishes. Emphasis is on species and methods utilized in the eastern United States. Offered spring semester.

FORS(RLST) 5400/7400-5400L/7400L. Park Management. 3 hours. Two lectures and one 2-hour lab period.

Management of public lands and open spaces, including management tools, type and nature of physical effects, visitor management principles, and site development. Use of maps, aerial photos, and compass in recreation area development. Offered spring semester.

FORS 5410/7410. Wilderness Management. 3 hours.

Origins of the wilderness movement; wilderness values; scope of wilderness management as limited by laws and philosophy; principles of wilderness management; and review status and management of non-roaded natural areas. Offered spring semester.

FORS 5720/7720-5720L/7720L. Forest Harvesting and Roads. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FORS 3000-3000L.

Prerequisite or corequisite: FORS 4010-4010L. Techniques and systems for harvesting and roading forests. Production, cost, quality, safety, and environmental protection measures. Field exercises stress planning of harvesting and road construction operations to achieve desired objectives. Offered fall semester.

FORS 5730/7730. Principles of Forest Management. 3 hours.

Prerequisite: BIOL 1104-1104L or BTNY 1210-1210L or permission of school.

Practical forestry in the South with emphasis on the management of private forest land. Topics in-

clude forest regeneration, tree identification and growth, basic measurements of tree crops. Not open to FRS majors. Offered spring semester of even-numbered years.

FORS 5740/7740. Forest Operational Planning. 3 hours.

Prerequisite: (FORS 3710-3710D and FORS 4010-4010L and FORS 4620/6620) or permission of school.

Integration of silviculture, finance, forest engineering, biometrics, and ecology to analyze industrial problems. Offered fall semester.

FORS 5750/7750. Procurement and Management of Wood Fiber Supply. 3 hours.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

Management of the wood fiber supply, program management functions, legal aspects and analysis of current issues in raw material management. Offered spring semester.

FORS 5760/7760. Forest Products Marketing. 3 hours.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

Planning, organizing, and managing forest products marketing programs, domestically and internationally. Focus on developing marketing strategies and implementation of marketing plans in the context of forest industry structures and distribution channels. Offered fall semester.

FORS 5820/7820. Natural Resources Law for Managers and Administrators. 4 hours.

Statutory, case law, and regulations concerning resource conservation, allocation, and development. Modern, systems-sensitive regulatory programs affecting natural resources administration analyzed. Examination of the division and nature of the functions of the judicial and executive branches of government. Non-Traditional Format: Law library exercise requiring sixty or more hours per semester. Offered spring semester.

FORS 5850/7850. Forest Policy Issues. 2 hours.

Prerequisite: POLS 1101-1101D or FORS 4800/6800-4800D/6800D.

Forestry issues and political processes. A general framework for analyzing current issues is developed and specific issues are analyzed each year. Offered spring semester.

(FORS)(ANTH)ECOL 6140. Principles of Conservation Ecology and Sustainable Development II. 3 hours.

Prerequisite: ECOL 6080.

Social science dimensions of conservation and sustainable development; social, economic, and political considerations in managing natural resources; policy-level aspects to project implementation. Offered spring semester.

FORS 6150. Control and Systems Theory for the Environmental Scientist. 3 hours.

Prerequisite: MATH 2700.

Development of models of the dynamic behavior of environmental systems from the perspective of process engineering and control. State-space, continuous-time, and discrete-time representations. Introduction to, and tutorials in, the MATLAB-SIMULINK software package. Offered fall semester of even-numbered years.

FORS 6540-6540L. Physical and Mechanical Properties of Wood. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FORS 4500-4500L.

Concepts in stress/strain development and the visco-elastic response. Wood moisture relationships with mechanical properties. Offered fall semester of even-numbered years.

FORS 6750. Experimental Methods in Forest Resources Research. 3 hours.

Prerequisite: STAT 6220.

Statistical procedures and computer software to collect, analyze, and interpret forest resources research data. Offered fall semester.

FORS 6760-6760L. Quantitative Models for Forest Resources Managers. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: STAT 6220 or permission of school.

Model forms used to simulate tree and forest stand development as well as models used to simulate the growth of various wildlife and fish species. Parameter estimation methods and model evaluation included. Offered spring semester.

FORS 7000. Master's Research. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FORS 7020. Tree Morphogenesis. 3 hours.

Prerequisite: Permission of school.

Differentiation of tree structures and functions. Topics include the shoot and root apex, the cambium, phase change and differentiation of tissues and organs in vitro. Offered fall semester of odd-numbered years.

FORS 7300. Master's Thesis. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

FORS 7630. Intensive Forest Management. 3 hours.

Prerequisite: FORS 4010-4010L.

Effects of silvicultural treatments on growth, yield, and product distributions of forest stands. Effects of vegetation management at various points in the life of the stand, fertilization, thinning, pruning, and initial spacing included. Effect magnitude as an objective criterion for management decision making is emphasized. Offered fall semester.

FORS 7640. Advanced Forest Management. 3 hours.

Prerequisite: FORS 4620/6620 or permission of school.

Models for estimating forest yields at different points in time, including models for uneven-aged stands, and thinned stands, and methods for adjusting for effects of cultural treatments. Whole stand and diameter distribution yield models examined. Offered spring semester.

FORS 7710. Advanced Forest Economics. 3 hours.

Prerequisite: ECON 2106.

Prerequisite or corequisite: FORS 4710/6710-4710L/6710L.

Microeconomic and production economics theory with forest resources applications, financial analysis of investments, social benefit-cost analysis. Offered spring semester.

FORS 7780. Timberland Accounting, Finance, and Taxation. 3 hours.

Prerequisite: ACCT 7990.

Timberland accounting, financial analysis of forest products company operations, financial evaluation of timberland investment and forest management decision alternatives, linkages between financial markets and timberland, timber taxation, and strategies involving forest assets in estate planning. Offered fall semester.

FORS 7790. Forest Finance Decisions. 3 hours.

Prerequisite: FORS 7780 or permission of school.

Analysis of forest asset financing, acquisition, management, and disposition decisions from a financial perspective. Development of financial strategies for a forestry operation, timberland portfolio management, asset pricing models and timberland, the behavior and evolution of forest asset markets, timber access options, and entrepreneurship in forestry. Offered spring semester.

FORS(AAEC) 7860. Resource Economics and Management. 3 hours.

Prerequisite: AAEC 6580-6580L or ECON 8000.

Economic and physical concepts of scarcity, the impact of market and social factors on resource use, and the optimal management of renewable and nonrenewable resources. Offered spring semester.

FORS 7981. Fisheries and Aquaculture Problems. 1-12 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to fisheries and aquaculture at the masters level. Non-Traditional Format: Formal classes are not held. Faculty members assist students as needed. Offered fall, spring, and summer semesters.

FORS 7982. Forestry Problems. 1-12 hours.

Repeatable for maximum 24 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to forestry at the masters level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 7983. Forest Soils, Hydrology and Environmental Systems Problems. 1-12 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to forest soils, hydrology, and environmental systems at the masters level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 7984. Wildlife Ecology and Management Problems. 1-12 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to wildlife ecology and/or management at the masters level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 7990. Supervised Professional Practicum in Forest Resources. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

University-level teaching, including the presentation of university-level lectures and/or laboratory sessions under faculty supervision. Non-Traditional Format: Students lecture in a classroom setting and meet with a faculty supervisor to discuss teaching technique. Offered fall, spring, and summer semesters.

FORS 8030. Advanced Tree Physiology. 3 hours.

Prerequisite: FORS 3040 or permission of school.

Recent research in the processes that directly or indirectly affect carbon gain and allocation, including photosynthesis, respiration, nutrient uptake, water relations, and growth of trees. Offered spring semester of odd-numbered years.

FORS 8040. Current Topics in Forest Biotechnology. 2 hours.

Prerequisite: Permission of school.

Applications of genetic, biochemical, and physiological principles to forest trees; forest products and organisms affecting forests, including in vitro propagation, genetic engineering, genomic mapping, bioprocessing and biological control of tree pests and pathogens. Offered fall semester of even-numbered years.

FORS 8050. Forest Stand Dynamics. 3 hours.

Prerequisite: FORS 4010-4010L or permission of school.

Dynamics of mortality, growth, and biomass allocation in forest stands during the four stages of development (stand initiation, stem exclusion, transition, and old growth) with emphasis on silviculture of southeastern United States forests. Offered spring semester of odd-numbered years.

FORS 8100. Advanced Forest Ecology. 3 hours.

Prerequisite: FORS 3020-3020L or ECOL(BIOL) 3500-3500L or permission of school.

Factors regulating the structure and function of forest ecosystems, forest energetics, community dynamics, and research methods. Offered fall semester of even-numbered years.

FORS 8120. Hillslope Hydrology Seminar. 2 hours.

Prerequisite: FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Current concepts used to describe water and chemical movement on watershed scales. Conceptual models of flow at watershed scales, saturated/unsaturated flow and transport processes, and techniques for measuring soil moisture, soil potential, and lateral surface and subsurface flow. Offered spring semester.

FORS 8150. System Identification for the Environmental Scientist. 3 hours.

Prerequisite: FORS 6150.

Calibration of models of environmental systems against field data. Methods of parameter estimation, recursive estimation, time-series analysis and filtering theory. Model validation and analysis of uncertainty. Case studies in surface and groundwater quality and aquatic ecosystems. Not offered on a regular basis.

FORS 8160. Environmental Process Control Laboratory. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: FORS 6150 or permission of school.

Instrumentation and systems for real-time remote sensing and control of the behavior of environmental systems and contaminant treatment technologies. Functions of on-line respirometry and intelligent/software sensors. Principles and integration of sample retrieval, preparation, analysis,

data storage, communication, and presentation. Not offered on a regular basis.

FORS 8170. Environmental Systems Analysis and Control. 1-3 hours. 0-3 lectures and 0-3 lab periods of 2 hours per week.

Prerequisite: Permission of school.

Current topics, books and articles in inter-disciplinary studies of the analysis and regulation of environmental systems. Cross-disciplinary thinking through a diverse set of topics (such as choice of wastewater infrastructure for sustainable cities, or protocol for model validation). Non-Traditional Format: 1-3 hours seminar/discussion depending on topics. Not offered on a regular basis.

FORS 8180. Principles of Forest Land Treatment. 2 hours.

Basic principles for designing forested systems for treatment of municipal and industrial biosolids and wastewater. Hydrologic loading and assimilation/degradation pathways for N, P, metals and organics; methods for determining land-limiting constituents. Offered spring semester of odd-numbered years.

FORS 8200. Scientific Research in Forest Resources. 2 hours.

Prerequisite: Permission of school.

The scientific method, standards for good scientific conduct, research proposal writing and reviewing skills are emphasized. Offered fall and spring semesters.

FORS 8300. Wildlife and Fisheries Seminar. 1-2 hours. Repeatable for maximum 6 hours credit. Recent advances in wildlife and fisheries research and management. Offered fall, spring, and summer semesters.

(FORS)(BTNY)ECOL 8310. Population Ecology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and permission of department.

Advanced ecological theory of biological populations. Mathematical and evolutionary treatment of population growth and regulation, niche theory, foraging theory, predator-prey theory, habitat selection, and competition. Offered fall semester.

FORS 8350-8350L. Waterfowl and Wetland Management. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: Permission of school.

Ecology of North American waterbirds (ducks, geese, swans, shorebirds, rails, gallinules, wading birds) and their habitats. Techniques for managing waterfowl populations by harvest regulations and habitat manipulation. Identification and requirements of important wetland plants. Non-Traditional Format: Field trips of up to one week in length required. Offered fall semester of odd-numbered years.

FORS 8390-8390L. Estimation of Fish and Wildlife Population Parameters. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: Permission of school.

Statistical methods for estimating parameters and testing hypotheses of fish and wildlife populations. Models of population dynamics. Sampling and estimation methods including line-transect, mark-recapture, removal, catch-effort, tag-recovery, and analysis of failure times. Optimization and decision-theoretic methods for wildlife and fisheries management. Offered fall semester.

FORS 8480. Quantitative Modeling of Forest Stands. 3 hours.

Prerequisite: Permission of school.

Application of statistical and mathematical modeling concepts along with computer technology to develop models of forest tree and stand growth and yield. Formulation of mathematical models with proper biological behavior and estimation of parameters using compatible growth and yield structures and systems fitting methods. Offered spring semester.

FORS 8490. Sampling Techniques for Biological Populations. 3 hours.

Prerequisite: [STAT 4240/6240 and STAT 4510/6510] or permission of school.

Theory of probability sampling procedures for populations of interest to forest resource managers. Offered spring semester of even-numbered years.

FORS(PARA) 8500-8500L. Diseases of Wildlife I. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: FORS(PARA) 8510-8510L.

Fundamental causes of disease-induced morbidity and mortality among free-ranging wildlife populations. Etiology, pathogenesis, clinical signs, lesions, epidemiology, diagnosis, and management significance of diseases produced by viral and microbial pathogens. Offered summer semester.

FORS(PARA) 8510-8510L. Diseases of Wildlife II. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: FORS(PARA) 8500-8500L.

Fundamental causes of disease-induced morbidity and mortality among free-ranging wildlife populations. Emphasis is on the etiology, pathogenesis, clinical signs, lesions, epidemiology, diagnosis, and management significance of diseases of parasitic, toxicologic, or miscellaneous etiologies. Offered summer semester.

FORS 8550. Chemistry and Synthesis of Wood Adhesives. 3 hours.

Prerequisite: CHEM 2410 and CHEM 2410L.

Synthetic resins chemistry including their raw materials, formulations and procedures of their synthesis, and their chemical and physical properties as related to wood adhesive formulations. Offered fall semester.

FORS(GEOL) 8730. Aquifer Mechanics. 3 hours.

Prerequisite: FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Mechanics of flow through subsurface media, including flow in confined, water table, and leaky aquifers, delayed yield, partially penetrating wells, boundaries, multiple wells, dual porosity media, and fractured rock; use of aquifer tests to estimate aquifer hydraulic properties. Offered spring semester.

(FORS)GEOL 8740. Hydrologic Flow and Transport Modeling. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 8700 or FORS 4120/6120.

Solutions of surface and subsurface flow and transport problems including finite difference, finite element, and boundary integral methods. Analytic techniques include Laplace-, z -, and Fourier-transform, complex variable, and separation of variables methods. Application to problems commonly found in the environmental field, including capture zones, particle-tracking, advection-dispersion, and non-aqueous phase liquids. Offered spring semester of odd-numbered years.

FORS 8780. Issues in Timberland Finance and Management. 3 hours.

Prerequisite: FORS 7780.

Current and emerging issues in financing and managing timberland properties. Valuation, risk analysis, and forms of timberland control, at domestic and international levels. Offered spring semester.

FORS 8981. Fisheries and Aquaculture Problems. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to fisheries and aquaculture at the doctoral level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 8982. Forestry Problems. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to forestry at the doctoral level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 8983. Forest Soils, Hydrology and Environmental Systems Problems. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to forest soils, hydrology, and environmental systems at the doctoral level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 8984. Wildlife Ecology and Management Problems. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Individual student problems pertaining to wildlife ecology and management at the doctoral level. Non-Traditional Format: Formal classes are not held. Faculty assist students as needed. Offered fall, spring, and summer semesters.

FORS 9000. Doctoral Research. 1-12 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

FORS 9300. Doctoral Dissertation. 1-12 hours. Repeatable for maximum 36 hours credit.

Prerequisite: Permission of school.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Graduate School

Gordhan L. Patel, *Dean*
542-4806

(Boyd Graduate Studies Research Center)

Courses having a Graduate School prefix are listed below:

GRSC 7770. Graduate Internship. 1-3 hours.
Repeatable for maximum 40 hours credit.

Prerequisite: Permission of school.

Provides graduate teaching assistants with knowledge of pedagogical approaches and available support systems. Special sections are reserved for international students, with focus on use of language, pedagogy, and cultural aspects of teaching in this country. Non-Traditional Format: Students meet with faculty members on a regular basis. Offered on a regular basis.

GRSC 9270. Graduate Study Completion. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of school.

Designed for graduate students completing degree requirements who will be using staff time or University facilities and for whom no regular course is appropriate. Non-Traditional Format: Students will use staff time or University facilities to complete degree requirements. Offered on a regular basis.

The Henry W. Grady College of Journalism and Mass Communication

J. Thomas Russell, Dean

Leonard N. Reid, *Associate Dean, Graduate Studies, 542-7833*
(Journalism Building)

The graduate studies program of the Grady College of Journalism and Mass Communication offers three graduate degrees for students preparing for professional and academic careers: the Master of Arts degree, the Master of Mass Communication degree, and the Doctor of Philosophy degree.

The Master of Arts program provides advanced work and specialization for careers in advertising, broadcasting, newspapers, magazines, and public relations. The Master of Mass Communication degree serves those students whose career goals indicate that additional course work will be more advantageous to them than completion of the traditional thesis.

The PhD program is designed to produce critical scholars capable of independent and original research. The program offers advanced study and specialization in preparing for careers in teaching and research or for positions of responsibility in the mass media, business, industry, and government.

Applicants accepted for the master's programs and PhD program begin their program in the Fall semester.

Admission is based on undergraduate grade point average, the results of the Graduate Record Examinations (GRE), and letters of recommendation, as well as previous professional experience and scholarly work.

Anyone holding a bachelor's degree from an accredited college or university is eligible to apply for admission to the master's programs. A master's degree is required for acceptance into the PhD program.

The program is open both to students with undergraduate majors in journalism and mass communication and to those who have majored in other areas. Master's students without backgrounds in journalism and mass communication may be required to take 9 credit hours of undergraduate-level foundation courses before registering for more than 6 hours of graduate courses. If not previously completed, a course in statistics is also required.

Financial assistance for journalism and mass communication graduate students is available through a variety of sources, including college assistantships, university assistantships, fellowships, scholarships, loans, and student employment.

Applications and additional information may be obtained from the Graduate Studies Office, College of Journalism and Mass Communication.

Advertising and Public Relations

ADPR 5740/7740. Advertising and Communication Campaigns. 3 hours.

Prerequisite: ADPR 5710 and permission of department.

Corequisite: ADPR 5710.

Managerial and decision making processes in simulated situations with student groups functioning as advertising agencies to plan, implement, and manage advertising and communication campaigns for assigned clients. Offered fall, spring, and summer semesters.

ADPR 5790/7790. Advertising Portfolio Seminar. 3 hours.

Prerequisite: ADPR 3110 and ADPR 3120 and ADPR 3130 and permission of department.

Student production and development of an advertising portfolio of their best creative work with

emphasis on both verbal and visual skills. Offered spring semester.

ADPR 5950/7950. Public Relations Campaigns. 3 hours.

Prerequisite: ADPR 5910.

Research, planning, and preparation of an integrated public relations campaign. Campaigns will alternate among business, governmental, and organization problems. Offered fall, spring, and summer semesters.

Journalism

JOUR 5350/7350. Advanced Newspaper Editing and Design. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: JOUR 3510 and permission of department.

Techniques of advanced newspaper editing and design, with emphasis on the visual aspects of newspaper editing. Offered fall semester.

JOUR 5360/7360. Advanced Magazine Editing and Design. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: JOUR 3510 and permission of department.

Planning, processing, and production of a magazine. Offered fall and spring semesters.

JOUR 5410/7410. Journalism Ethics. 3 hours.

Prerequisite: JOUR 3310 and JOUR 3510.

Issues of journalistic ethics and social responsibility confronting contemporary American print media and students planning journalism careers. Offered fall semester.

JOUR 5530/7530. Editorial Writing and Issues. 3 hours.

Prerequisite: JOUR 3410 and permission of department.

Creation, production, and analysis of editorials and editorial pages. Methods of identifying and researching issues and organizing, writing, and editing editorials will be stressed along with methods of analyzing editorials and editorial pages. Offered fall semester.

JOUR 5580/7580. Magazine Article Writing. 3 hours.

Prerequisite: JOUR 3310 and JOUR 3510 and permission of department.

Methods and procedures in writing various types of articles and features for magazines, magazine sections of newspapers, and other periodicals. Offered fall and spring semesters.

JOUR 5590/7590. Critical Writing and Reviewing. 3 hours.

Prerequisite: JOUR 3510 and permission of department.

Criticizing and reviewing popular culture and fine arts offerings, such as films, television, pop music and theatre, dance and classical music—for newspapers, magazines, and broadcast media. Offered spring semester.

JOUR 5600/7600. Investigative Reporting. 3 hours.

Prerequisite: JOUR 5300 and permission of department.

Techniques, methods, and practices of investigative, interpretive, and in-depth reporting for print media. Projects in public affairs reporting are developed. Offered spring semester.

JOUR 5620/7620. Magazine Management. 3 hours.

Prerequisite: JOUR 3310.

Finance and planning skills required to manage the business side of a magazine. Attention will be given to the various systems used in the magazine industry to produce a finished product. Offered spring semester.

JOUR 5640/7640. Newspaper Management. 3 hours.

Prerequisite: JOUR 3310.

Business and editorial management of newspapers, including newsroom, circulation, advertising, and promotion strategies. Offered fall semester.

JOUR 5660/7660. Journalism in the Secondary School. 3 hours.

News gathering, news writing, media law and ethics, copy editing, typography, photography, design, desktop publishing, broadcast news, and business practices of newspapers, with specific emphasis on advising staffs of high school newspapers and other media and editing public relations publications for schools. Offered every year on a regular basis.

JOUR 5670/7670. Contemporary American Newspapers. 3 hours.

Prerequisite: JOUR 3310.

The newspaper and its role in America today. Concentration is on content, policy, influence, social responsibility and ethics, economics, marketing strategies, and technology. Leading newspapers in various regions are examined closely. Offered spring semester.

JOUR 5700/7700. Advanced Magazine Article Writing. 3 hours.

Prerequisite: JOUR 5580/7580 and permission of department.

An advanced professional course utilizing research and writing techniques to produce articles

and features for specific magazine audiences. Offered spring semester.

JOUR 5800/7800. Computer Assisted Reporting. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: JOUR 5300 and permission of department.

Use of computers in journalism to gather, analyze, and present information. Subjects include spreadsheets, databases, and electronic searches in public and commercial sources. Offered fall semester.

JOUR 7310. Journalism Projects. 3 hours.

Prerequisite: JRM 8000 and JRM 8010.

Directed research resulting in written projects in selected areas of media. Open only to Journalism MMC students. Offered spring semester.

Journalism Core

JRLC 5040/7040. Law of Mass Communication. 3 hours.

Prerequisite: (ADPR 3100 and ADPR 3850 and JOUR 3410) or (TELE 3010 and permission of school).

First Amendment principles and communication law affecting print, telecommunications, advertising, and public relations. Offered fall, spring, and summer semesters.

JRLC 5490/7490. History of the Mass Media in the United States. 3 hours.

Mass media in the United States from the colonial period to the present. Special attention is given to newspapers, magazines, radio, and television and their relationship to the history and development of the nation. Offered on a regular basis.

Journalism and Mass Communication

JRM 7000. Master's Research. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

JRM 7300. Master's Thesis. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered every year on a regular basis.

JRM 8000. Proseminar in Mass Communication. 3 hours.

Prerequisite: Permission of department.

Research traditions in mass communication, with emphasis on historical developments within the field and intellectual perspectives of mass communication researchers. Major research streams and methodologies are introduced, discussed, and critiqued. Offered every year on a regular basis.

JRM 8010. Research Methodology in Mass Communication Research. 3 hours.

Prerequisite: Permission of department.

Quantitative and qualitative methodologies of mass communication research, with emphasis on the research process, concepts and issues of research design, and methods of data collection. Topics introduced include measurement, sampling, focus groups and interviewing, survey and experimental design, and data analysis. Offered every year on a regular basis.

JRM 8020. Public Opinion. 3 hours.

Prerequisite: Permission of department.

Patterns of public opinion formation including their cultural, social, and economic impact. Analysis of communication content and techniques involving public opinion and persuasion. Offered every year on a regular basis.

JRM 8030. Mass Communication and Society. 3 hours.

Prerequisite: Permission of department.

The social, cultural, and economic analysis of the processes and effects of mass communication in contemporary society. Offered every year on a regular basis.

JRM 8040. International Mass Communication. 3 hours.

Prerequisite: Permission of department.

The systems of mass communication throughout the world; philosophies behind them; social, political, and economic reasons why a given kind of pattern develops; comparative analysis of operating procedures of various media. Offered every year on a regular basis.

JRM 8050. Research and Directed Readings in Mass Communication. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research and directed readings in mass communication under the direction of a sponsoring graduate faculty member. Non-Traditional Format:

Directed study. Offered every year on a regular basis.

JRMC 8100. Advertising and Communication Management. 3 hours.

Prerequisite: Permission of department.

Major decision processes in advertising and communication management. Offered every year on a regular basis.

JRMC 8110. Advertising Media Planning. 3 hours.

Prerequisite: JRMC 8100 and permission of department.

Media planning function and theory. Emphasis will be on understanding and evaluating media theory and media for use in advertising and marketing communication programs. Offered every year on a regular basis.

JRMC 8120. Advertising and Public Relations Research. 3 hours.

Prerequisite: Permission of department.

Nature, scope, and techniques of advertising and public relations research, with emphasis on consumer markets, public, media audiences, and message effects. Offered every year on a regular basis.

JRMC 8130. Special Topics in Advertising. 3 hours.

Prerequisite: Permission of department.

Problems, issues, and research in advertising. Offered every year on a regular basis.

JRMC 8140. Public Relations Management. 3 hours.

Prerequisite: Permission of department.

Effective practices, concepts, and techniques as they apply to the management of public relations. Offered every year on a regular basis.

JRMC 8150. Public Relations Theory. 3 hours.

Prerequisite: Permission of department.

Seminal and recent research related to the construction of theory in public relations. Offered every year on a regular basis.

JRMC 8160. Special Topics in Public Relations. 3 hours.

Prerequisite: Permission of department.

Problems, issues, and research in public relations. Offered every year on a regular basis.

JRMC 8200. Telecommunications Management. 3 hours.

Prerequisite: Permission of department.

The establishment, operations, and planning of modern telecommunications media systems. Theory and practice of management in innovative technology-based industries, including radio, television, cable, satellite-to-home delivery, and recordings. Offered every year on a regular basis.

JRMC 8210. Telecommunications Policy. 3 hours.

Prerequisite: Permission of department.

Telecommunications policy making, regulation of broadcasting, cable, satellites, computer networks, and telephone; impact of technological change on the regulation of telecommunications. Offered every year on a regular basis.

JRMC 8220. Telecommunications Programming and Criticism. 3 hours.

Prerequisite: Permission of department.

Criticism and analysis of contemporary and historical programming. Examines a wide variety of content as art form, cultural product, and information source, including social, legal, and economic roles of criticism in media. Offered every year on a regular basis.

JRMC 8230. Emerging Telecommunications Technologies. 3 hours.

Prerequisite: Permission of department.

Technical, social, and economic aspects of the new telecommunications technologies. Offered every year on a regular basis.

JRMC 8240. Special Topics in Telecommunications. 3 hours.

Prerequisite: Permission of department.

Problems, issues, and research in telecommunications. Offered every year on a regular basis.

JRMC 8350. Special Topics in Journalism. 3 hours.

Prerequisite: Permission of department.

Problems, issues, and research in journalism. Offered every year on a regular basis.

JRMC 9000. Doctoral Research. 1-9 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

JRMC 9010. Mass Communication Theory. 3 hours.

Prerequisite: Permission of department.

Theoretical thinking and theories of mass communication. Emphasizes history, philosophies, and structures of theoretical explanation, and the interaction between theory and the organizations, processes, and effects of mass communication. Offered every year on a regular basis.

JRMC 9020. Quantitative Research in Mass Communication. 3 hours.

Prerequisite: (JRMC 8010 and STAT 6210) or permission of department.

Advanced quantitative approaches to mass communication research with emphasis on research design issues, data management, and statistical analyses. Offered every year on a regular basis.

JRMC 9030. Critical, Cultural, and Naturalistic Approaches to Mass Communication Research. 3 hours.

Prerequisite: JRMC 8010 or permission of department.

Paradigms, concepts, and methodologies of critical, cultural, and naturalistic approaches to mass communication research. Emphasis on ethnography, case study, interviewing, life history, textual analysis, and field observation. Research design and techniques of data collection, analysis, and presentation are studied within the context of mass communication institutions, messages, and audiences. Offered every year on a regular basis.

JRMC 9040. Historical Research in Mass Communication. 3 hours.

Prerequisite: Permission of department.

Historical research approaches to mass communication with emphasis on historical writings, the philosophy of history, and methods of data collection and analysis. Emphasis on United States mass media history. Offered every year on a regular basis.

JRMC 9050. Mass Communication Law. 3 hours.

Prerequisite: Permission of department.

The problems, issues, and research methods of mass communication law and regulation with emphasis on the critical examination of writings in the field. Offered every year on a regular basis.

JRMC 9060. Special Topics in Mass Communication. 3 hours.

Prerequisite: Permission of department.

Selected topics in mass communication. Offered every year on a regular basis.

JRMC 9300. Doctoral Dissertation. 1-9 hours.

Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered every year on a regular basis.

The College of Pharmacy

Stuart Feldman, Dean

Clinical and Administrative Sciences

Joseph T. DiPiro, *Head*

Randall L. Tackett, *Graduate Coordinator, 542-7400*

Pharmaceutical and Biomedical Sciences

F. Douglas Boudinot, *Head*

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Graduate work leading to the MS and PhD degrees may be pursued in the areas of Clinical and Administrative Sciences or Pharmaceutical and Biomedical Sciences.

Clinical and Administrative Sciences include the general areas of pharmacy care administration and experimental therapeutics. Pharmacy care administration is the study of the economic, social, behavioral, and political aspects of pharmaceutical services. It is an interdisciplinary program which may contain elective concentration of courses in business administration, psychology, statistics, political science, and other disciplines which impact on ethical drug issues. The program prepares the student to address the complex socio-political problems relating to ethical drug consumption, manufacturing, distribution, and payment mechanisms.

Experimental therapeutics is a multi-disciplinary program which involves the investigation of disease processes and the therapeutic regimens in their treatment. Current areas of interest include diseases of the cardiovascular system, learning and memory, immunology, and renal diseases. Additionally, the efficacy of therapeutic regimens in special populations (e.g. geriatric, women, minority) are also of interest. The graduate program is designed to develop competencies in experimental therapeutics which is translational between the basic, applied and clinical settings.

Pharmaceutical and Biomedical Sciences include the general areas of pharmaceuticals, pharmacology, toxicology and medicinal chemistry. Graduate studies in pharmaceuticals explore and define the physical and chemical properties of pharmaceutical systems, and the mechanisms by which medication from these systems may be made available for utilization by the body. Areas of specialization include drug delivery, pharmacokinetics, biopharmaceutics, and industrial pharmacy. The multidisciplinary approach is used to solve research problems in pharmacokinetics, stability kinetics, dissolution phenomena, drug analysis, product development and dosage form design.

Pharmacology is the study of the action of chemicals on living organisms, the effects induced and their therapeutic applications. As a scientific discipline, it is based on the biological sciences with particular emphasis on physiology and biochemistry. Specific programs are available in neuropharmacology, behavioral pharmacology, biochemical pharmacology, and cardiovascular pharmacology.

Toxicology is the scientific discipline which deals with the injurious effects of chemicals on humans and other living organisms. Toxicology is a broad, multi-disciplinary field requiring expertise in a number of biological sciences, including biochemistry, physiology, pharmacology, cell biology, pathology and biostatistics. Toxicology is rapidly expanding in scope and prominence, due to the increasing use/misuse of chemicals and to the increased recognition of hazards posed by chemicals. Students may choose to work in ongoing research programs involving studies of: drug/chemical interactions; relative pharmacokinetics and toxicity of inhaled and ingested hydrocarbons; mechanisms of cytotoxic actions of halogenated organics; biochemical role of calcium in cellular injury by chemicals; influence of nutrition on chemical metabolism and toxicity; role of diet in chemically induced cancers; influence of lead exposure and drugs on harmful effects of noise.

Medicinal chemistry is unique among the specialized areas of chemistry, in that it requires a significant background in the biological sciences as well as a thorough understanding of chemistry. Areas of specialization are the synthesis of new compounds of medicinal interest,

in vitro and *in vivo* studies of drug metabolism, and analytical studies of drugs in dosage forms and biological samples such as plasma or urine.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

PHRM 4050/6050. Principles of Medicinal Chemistry I. 3 hours.

Prerequisite: PHRM 3060 or permission of department.

Corequisite: Undergraduate level only: PHRM 4410 and PHRM 4850.

Drugs acting on the peripheral nervous system and peripheral acting hormones and antihormones, including structure-activity relationships; mechanisms of action; storage and chemical stability reactions. Offered fall semester.

PHRM 4060/6060. Principles of Medicinal Chemistry II. 3 hours.

Prerequisite: PHRM 3060 or PHRM 4050/6050.

Corequisite: Undergraduate level only: PHRM 4420 and PHRM 4860.

Central nervous system drugs, including their physio-chemical properties, structure-activity relationships and toxicities, side effects, and drug interactions. Offered spring semester.

PHRM 4180/6180. Drug Therapy of Infectious Disease. 3 hours.

Prerequisite: PHRM 3060 or permission of department.

Corequisite: Undergraduate level only: PHRM 4120.

Chemistry, spectrum of activity, place in therapy, stability, incompatibilities, and toxicities of antibacterials, antivirals, and antibiotics. Offered fall semester.

PHRM 4190/6190. Chemotherapy of Cancer. 2 hours.

Prerequisite: PHRM 3060 or permission of department.

Corequisite: Undergraduate level only: PHRM 4130.

Etiology, prevention, and treatment of cancer in man. Emphasis is on the mechanism, toxicity, and side effects of anticancer agents of various antineoplastic agents. Offered spring semester.

PHRM 5260/7260. Clinical Pharmacokinetics I. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (PHRM 4210 and PHRM 4420) or permission of department.

Basic pharmacokinetic concepts and the design and monitoring of therapeutic drug regimens. Emphasis is on learning how to analyze and interpret patient-specific drug concentration time data. Offered fall semester.

PHRM 5270/7270. Clinical Pharmacokinetics II. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: PHRM 5260/7260 or permission of department.

Nonlinear pharmacokinetics and effects on therapeutic drug regimens; emphasis on drug and disease-specific case studies. Offered spring semester.

PHRM 6400. Human Physiology I. 4 hours.

Not open to students with credit in PHRM 3400.

Prerequisite: (BIOL 1104-1104L and CHEM 2410 and CHEM 2410L) or permission of department.

Physiology of the human body with emphasis on the central nervous system, autonomic nervous system and digestive system. Offered fall semester.

PHRM 6410. Pharmacology I. 4 hours.

Not open to students with credit in PHRM 4410.

Prerequisite: Permission of department.

Mechanisms of action of drugs in the human body. Specific drug classes that are covered include nonsteroidal antiinflammatory drugs, male and female reproductive agents, thyroid drugs, insulin and diabetes treatments, diuretics, ACTH, cholinergic, antihypertensives, hyperlipidemias, antianginals, cardiac glycosides, thrombolytics, and antiarrhythmics. Offered fall semester.

PHRM 6420. Pharmacology II. 4 hours.

Not open to students with credit in PHRM 4420.

Prerequisite: PHRM 6410 or permission of department.

Pharmacologic action, therapeutic application, and toxicology of drugs in current use, focusing on central nervous system and autonomic nervous system drugs. Offered spring semester.

PHRM 6470. Pathophysiology I. 4 hours.

Not open to students with credit in PHRM 3470.

Prerequisite: BIOL 1104-1104L and CHEM 2410 and CHEM 2410L.

Corequisite: PHRM 6400.

Mechanisms of human disease processes, including manifestation, mechanisms, diagnosis, treatment, prognosis. Emphasis is on cell injury, neurological, dermatological, oncological, gastrointestinal, visual, and auditory disorders. Offered fall semester.

PHRM 6480. Pathophysiology II. 4 hours.

Not open to students with credit in PHRM 3480.

Prerequisite: BIOL 1104-1104L and CHEM 2410 and CHEM 2410L.

Corequisite: PHRM 6500.

Mechanisms of human disease processes, including manifestation, mechanisms, diagnosis, treatment, prognosis. Emphasis is on inflammation, blood, endocrine, cardiovascular, pulmonary, and renal disorders. Offered spring semester.

PHRM 6500. Human Physiology II. 4 hours.

Not open to students with credit in PHRM 3410.

Prerequisite: Permission of department.

Human physiology of the cardiovascular, renal, endocrine, respiratory, immune, and reproductive systems, including selected topics in integrated physiological regulation. Directed literature studies in human physiology. Offered spring semester.

PHRM 6550. Essentials of Animals in Biomedical Research. 2 hours. Two 2-hour lab periods.

Prerequisite: Permission of department.

Humane methods of animal maintenance and experimentation; the testing methods which minimize animal distress; use of anesthetics, analgesics, and tranquilizers for commonly used lab species; methods for reporting deficiencies in animal care; laws pertaining to the use of animals in biomedical research. Offered fall semester.

PHRM(VPHY) 6910. Introductory Toxicology. 3 hours.

Basic toxicology principles, including dose-response relationships, principles of toxicity and safety evaluation, pharmacokinetics and metabolism of chemicals, basic mechanisms of cellular injury, factors influencing toxicity, carcinogenesis/mutagenesis, governmental regulations, and exposure and risk assessment. Offered fall semester.

PHRM 7000. Master's Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHRM 7210. Special Topics in Pharmacy. 3-5 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

Specialized pharmaceutical systems, processes and techniques, assignments of current literature and student presentations. Non-Traditional Format: Formal lectures are not held. Faculty work with students as needed. Offered fall, spring, and summer semesters.

PHRM 7220. Drug Development and Regulation. 3 hours.

Prerequisite: Permission of department.

Processes involved in drug discovery, development, and regulation, including methods of new drug characterization, preclinical and clinical testing, laboratory and manufacturing practice standards, government regulations applicable to the drug approval process for marketing and post-marketing surveillance. Offered spring semester of odd-numbered years.

PHRM 7230. Ethical Issues in Research. 2 hours.

Prerequisite: Permission of department.

Ethics of research in animals and human subjects, fraud, scientific misconduct, and conflicts of interest. Offered spring semester of even-numbered years.

PHRM 7300. Master's Thesis. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PHRM 8010. Biochemical Targets of Drug Design. 3 hours.

Prerequisite: Permission of department.

Rational design of drugs based on biochemical targets in humans and pathogenic organisms. Various methodology for the design of drugs, such as false-substrate, mechanism band, and suicide substrate will be presented. Offered on a regular basis.

PHRM 8070. Computational Methods for Drug Design and Discovery. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Common theoretical approaches relevant to drug design and discovery, including applied aspects of computational chemistry, quantitating structure-activity relationships (QSAR) and computational molecular biology. Specific topics include modeling of small molecules, proteins, nucleic acids, carbohydrates, and drug receptors; QSAR and 3D-QSAR; and bioinformatics approaches. Not offered on a regular basis.

PHRM 8080. Grantsmanship. 3 hours.

Prerequisite: Permission of department.

Organization and origination of research ideas and data into grants, manuscript, and other submissions. Not offered on a regular basis.

PHRM 8100. Pharmaceutical Analysis I. 3 hours.

Prerequisite: Permission of department.

Separation, identification, and analysis of drugs by thin-layer, gas, and high performance liquid chromatography, supercritical fluid chromatography, and capillary electrophoresis. Not offered on a regular basis.

PHRM 8110. Pharmaceutical Analysis II. 3 hours.

Prerequisite: Permission of department.

The separation, identification, and analysis of drugs and metabolites in biological samples. Not offered on a regular basis.

PHRM 8120. Pharmaceutical Analysis III. 3 hours.

Prerequisite: Permission of department.

Identification and analysis of drugs and other biomolecules by mass spectrometry. Not offered on a regular basis.

PHRM 8160. Chemistry of Synthetic Drugs. 2 hours.

Prerequisite: PHRM 4060/6060 and CHEM 8320. New and established methods for synthetic preparation of organic medicinal agents. Not offered on a regular basis.

PHRM 8170. Medicinal Chemistry Seminar. 1 hour. Repeatable for maximum 4 hours credit.

Discussion of research and new developments in medicinal chemistry. Offered fall, spring, and summer semesters.

PHRM 8180. Carbohydrate and Nucleoside Chemistry. 3 hours.

Prerequisite: Permission of department. Carbohydrate chemistry and its application to the synthesis of nucleosides and related classes of compounds. Not offered on a regular basis.

PHRM 8200. Pharmaceutics Seminar. 1 hour. Repeatable for maximum 8 hours credit.

Research and new developments in pharmaceutics. Non-Traditional Format: Formal lectures are not held. Faculty work with students as needed. Offered fall and spring semesters.

PHRM 8210. Advanced Topics in Pharmaceutics. 1 hour. Repeatable for maximum 10 hours credit. One 3-hour lab period.

Prerequisite: Permission of department. Methods of utilizing the literature relating to pharmaceutics and discussion of recent developments in the field. Offered fall and spring semesters.

PHRM 8220. Physical Pharmacy. 4 hours.

Prerequisite: Permission of department. Physical concepts and methods as they apply to pharmaceutical problems. Non-Traditional Format: Formal lectures are not held. Faculty work with students as needed. Offered fall semester of odd-numbered years.

PHRM 8230. Drug Delivery Systems. 4 hours.

Prerequisite: Permission of department. The concepts, principles, technology, and assessment of drug delivery to the blood and target sites by various routes. Offered spring semester of even-numbered years.

PHRM 8240. Technology in Industrial Pharmacy. 4 hours. One lecture and three 3-hour lab periods.

Prerequisite: Permission of department. Formation and production of powders, capsules, compressed tablets, coated tablets, liquids, and semisolids. Offered fall semester of even-numbered years.

PHRM 8260. Pharmacokinetics. 4 hours.

Prerequisite: Permission of department. The kinetics of drug absorption, distribution, and elimination with emphasis on the development and evaluation of mathematical models. Offered fall semester of even-numbered years.

PHRM 8270. Contemporary Concepts in Pharmacokinetics. 3 hours.

Prerequisite: PHRM 8260.

Techniques of pharmacokinetic and pharmacodynamic modeling and data treatment. Offered spring semester of odd-numbered years.

PHRM 8290. Computer Applications in Pharmaceutical Sciences. 3-5 hours. Repeatable for maximum 5 hours credit. Two lectures and 1-3 lab periods of 2 hours per week.

Applications of computers in pharmaceutical sciences. Not offered on a regular basis.

PHRM 8400. Pharmacology and Toxicology Seminar. 1 hour. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Research and new developments in pharmacology/toxicology. Offered fall and spring semesters.

PHRM 8420. Cardiovascular Pharmacology. 3 hours.

Prerequisite: Permission of department. Mechanisms of action of drugs used in the treatment of cardiovascular disease states at the system, organ, and molecular level. Offered fall semester of even-numbered years.

PHRM 8430. Advanced Neuropharmacology. 3 hours.

Prerequisite: PHRM 4420 or PHRM 6420 or permission of department.

Behavioral and neurochemical aspects of drug action in the central nervous system. Offered spring semester of odd-numbered years.

PHRM 8450. Coronary Heart Disease. 3 hours.

Prerequisite: Permission of department. Pathophysiology of and therapeutic strategies for treatment of coronary heart disease, including lipid profiles, stress, alcohol, smoking and obesity as interactive risks in coronary artery disease. The vascular biology of arteries and the biochemistry and cell biology of atherogenesis are examined. Offered spring semester.

PHRM 8610. Social Behavioral Theory in Health Care. 3 hours.

Prerequisite: Permission of department. Social behavioral theory and research methods used by health services researchers, focusing on determinants of health and illness, the interplay between values, technology, economics, and patient care. Offered spring semester of even-numbered years.

PHRM 8620. Pharmacy Care Administration Seminar. 1 hour.

Current topics of pharmacy and health care services research. Offered fall and spring semesters.

PHRM 8630. Health Care Systems. 3 hours.

Prerequisite: Permission of department. Health care policy and the research methods used by health services researchers; the complex

environment in which health care goods and services are delivered to consumers; the political, economic, and social forces influencing the health care system. Offered fall semester of odd-numbered years.

PHRM 8640. Research Methods in Pharmacy Care Administration. 3 hours.

Prerequisite: Permission of department.

Research methodology, including formulation of research questions and research hypotheses, selection of the research design, sampling, internal and external validity, data collection, data analysis, results presentation and discussion. Offered fall semester of even-numbered years.

PHRM 8660. Health Care Marketing. 3 hours.

Prerequisite: Permission of department.

Application of the marketing process to health care and exploration of how marketing theory and practice are applied in health care environments. Development and marketing of health care technology and consumer behavior issues, health beliefs, health promotion, and the role of patient education on behavior are explored. Offered spring semester of odd-numbered years.

PHRM 8670. Pharmacoeconomics and Health Care Technology Assessment. 3 hours.

Prerequisite: STAT 6220 and PHRM 8660.

The skills to design, conduct, analyze, and rate trials to evaluate health outcomes of various technologies or policies; theoretical models for health outcomes research integrated with pharmacoeconomics; the methodologic designs and statistical analyses commonly employed to evaluate various health technologies. Offered fall semester of odd-numbered years.

PHRM 8680. Pharmacoepidemiology. 3 hours.

Prerequisite: PHRM 8640.

Nature, purpose, and methods in pharmacoepidemiology and their place in pharmacy and health policy. The general concepts in epidemiology and pharmacoepidemiology such as study population, drug exposure, basic measurements, quality of measurements, designs, bias and confounding factors. Offered spring semester of odd-numbered years.

PHRM(VPHY) 8910. Organ Systems Toxicology I. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the blood, respiratory systems, nervous system, kidneys and the cardiovascular system. Offered fall semester of even-numbered years.

PHRM(POUL)(VPHY) 8920. Organ Systems Toxicology II. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the liver, carcinogenesis/mutagenesis, immune system, reproductive system, skin, and eyes. Offered spring semester of odd-numbered years.

PHRM(EHSC)(POUL)(VPHY) 8930. Chemical Toxicology. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Chemical contamination of air, water, and food by major agricultural and industrial chemicals. Emphasis will be placed on sources of contamination, fate of chemicals in the environment, target species, health effects, chemical analyses, and contamination control. Offered spring semester.

PHRM 9000. Doctoral Research. 1-15 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PHRM 9300. Doctoral Dissertation. 1-15 hours.

Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

The School of Social Work

Bonnie L. Yegidis, Dean
Nancy P. Kropf, *Graduate Coordinator*,
542-5429
(Tucker Hall)

The School of Social Work offers the MSW and the PhD degrees. The graduate professional curriculum is a four semester program leading to the Master of Social Work degree. Admission may be obtained by persons holding bachelor's degrees in any field which includes a liberal arts education if potential for graduate professional education is demonstrated. Advanced standing may be awarded to selected applicants who are graduates of undergraduate social work programs accredited by the Council of Social Work Education. The program for applicants eligible for advanced standing is three semesters in length.

Graduate assistantships and federal traineeships are available in limited numbers. In addition, a few public and voluntary agencies offer stipends.

The program includes two field instruction experiences: the first is generalist and begins in the spring semester of full-time study. The second is the concentration area and occurs in the third and fourth semesters of full-time study. Students may select either a concentration in family well being, or community empowerment and program development.

The School of Social Work also offers the PhD degree, with specialization in the development of knowledge for social work practice. The program includes advanced study in theory, research methods, assessment of practice, internship, and the dissertation. Admission criteria include the MSW, professional experience, and a strong academic record.

SOWK 6011. Social Welfare Policy and the Social Work Profession. 3 hours.

History of the social work profession and the structures, functions, philosophies, and policies of programs and services which are designed to ameliorate social problems. The process of recognizing and defining social problems and then developing legislation is analyzed. Offered fall semester.

SOWK 6022. Human Behavior in the Social Environment: Theoretical Perspectives. 3 hours.

Theories of human behavior which guide the practice of social work and provide the basis for assessment in social work practice. Theories such as the psychoanalytic, behavioral, ecological, and normative life stages are highlighted. Offered fall semester.

SOWK 6033. Direct Practice Methods. 3 hours.

Skill, knowledge, and values of generalist social work practice. Emphasis is placed on the strengths perspective and ecological system framework. Skill development areas include interviewing, communication, building relationships, and problem-solving. Offered fall semester.

SOWK 6044. Theory and Practice with Families and Groups. 4 hours.

Family and group dynamics in relation to social work practices with families and groups. Theory and practice are integrated and evaluated at various levels of practice. Offered fall semester.

SOWK 6055. Foundation Practicum and Seminar. 3 hours.

Prerequisite: SOWK 6011 and SOWK 6022 and SOWK 6033 and SOWK 6044.

Generalist practicum and integrative seminar. Learning plans are developed and implemented together with field instructors in community social service agencies. Offered spring semester.

SOWK 6066. Foundation Research Methods. 3 hours.

Developing, testing, refining, and using empirical scientific knowledge for social work practice. Offered spring semester.

SOWK 6074. Theory and Practice in Organizations and Communities. 4 hours.

Organizational and community dynamics, leadership, and change practices within agencies, agency networks, communities, and community empowerment groups. Offered spring semester.

SOWK 6082. Cultural Diversity. 3 hours.

The impact on social work practice of diversities in age, ethnicity, race, religion, ability, gender, and sexual orientation. Offered spring semester.

SOWK 6908. Independent Social Work Research. 1-5 hours. Repeatable for maximum 5 hours credit.

Prerequisite: Permission of department.

Readings course for independent research into the human services under the direction of a faculty member. Non-Traditional Format: Independent study. Not offered on a regular basis.

SOWK 7000. Master's Research. 1-5 hours. Repeatable for maximum 5 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Not offered on a regular basis.

SOWK 7011. Advanced Policy Analysis. 3 hours.

Prerequisite: SOWK 6011.

Social welfare policy analysis as a field of study. Concepts and tools of analysis are examined in a variety of social problem and related institutional fields. Offered fall semester.

SOWK 7023. Family-Centered Assessment and Practice with Individuals. 4 hours.

Prerequisite: SOWK 6055 and permission of department.

Assessment methods applicable to social work practice with individuals within the context of the family system. Offered fall semester.

SOWK 7033. Community Assessment and Empowerment Practices. 4 hours.

Prerequisite: SOWK 6074 and SOWK 6055.

Assessment and intervention with groups, organizations, and communities. Techniques of organizational and community assessment are developed, followed by models of planned intervention. Offered fall semester.

SOWK 7055. Concentration Practicum. 4 hours. Repeatable for maximum 10 hours credit.

Prerequisite: SOWK 6055.

Two semesters of practical field experience integrating knowledge of human behavior and interventive practice models. A final project demonstrates advanced competence in assessment, practice, diversity, and research. Offered fall and spring semesters.

SOWK 7066. Evaluation of Family-Centered Social Work Intervention. 4 hours.

Prerequisite: SOWK 6066.

Evaluation of direct social work practices with individuals, couples, families, and small groups, utilizing social science research methodologies. Offered spring semester.

SOWK 7166. Evaluation of Community and Institutional Practices. 4 hours.

Prerequisite: SOWK 6066.

Models of evaluation of community empowerment groups and institutional development programs. Skills are developed in the design and application of empirically-based outcome evaluations. Offered spring semester.

SOWK 7183. Social Work Treatment with Groups. 2 hours.

Prerequisite: SOWK 6044.

Direct theory-based practice methods with groups. Emphasis is placed on models which are effective with persons at risk because of race, age, ethnicity, ability, gender, or sexual orientation. Not offered on a regular basis.

SOWK 7222. Assessment and Psychopathology. 2 hours.

Prerequisite: SOWK 7023.

Assessment of individuals in the context of mental disorders. The evolution and assumptions of the DSM systems are examined in terms of strengths and limitations. Not offered on a regular basis.

SOWK 7233. Behavioral Methods in Social Work Practice. 2 hours.

Empirically supported, behavioral interventions for a variety of psychosocial problems. Alcohol and drug abuse, chronic mental illness, affective disorders, anxiety disorders, child and adolescent conduct and autistic disorders are highlighted. Not offered on a regular basis.

SOWK 7300. Master's Thesis. 1-5 hours. Repeatable for maximum 5 hours credit.

Corequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Not offered on a regular basis.

SOWK 7327. Topics in Aging. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies regarding interventions with abused and vulnerable adults. Families with older adult members are also highlighted. Not offered on a regular basis.

SOWK 7337. Topics in Community Practice. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies regarding intervention at the community level. Various models of community practice are included. Not offered on a regular basis.

SOWK 7347. Topics in Family and Child Welfare. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies regarding interventions with vulnerable children and their families. A variety of children's, school, parental, and related adult topics are highlighted. Not offered on a regular basis.

SOWK 7377. Topics in Program Development. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies regarding program design and development in the delivery of human services. Capabilities for organizing to develop programs are highlighted. Not offered on a regular basis.

SOWK 7387. Topics in Social Problem Intervention. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies regarding treatment or preventive interventions which are designed to address special social problems. Examples include substance abuse, family violence, mental health, physical health, and corrections. Not offered on a regular basis.

SOWK 7397. Topics in Social Justice. 2 hours. Repeatable for maximum 10 hours credit.

Human behavior, practice, research, and policies which affect organized movements for social justice in the United States of America and developing countries. Perspectives include feminist, racial and ethnic, sexual orientation, age, disability, and social development. Not offered on a regular basis.

SOWK 7417. Issues in Professional Employment. 1 hour.

The process of negotiating the job market. Analysis of personal professional market value is performed in relation to values among employers. Attributes of employers and potential colleagues in preferred settings are discussed. Not offered on a regular basis.

SOWK 8012. Theories of Social Work Practice I. 3 hours.

Critical analysis of social work practice theories for small systems, their assumptions, application, relevance to human conditions throughout the world, strengths and limitations in working with culturally diverse populations, and empirical evidence to support their effectiveness. Offered every year on a regular basis.

SOWK 8022. Theories of Social Work Practice II. 3 hours.

A critical analysis of social work practice theories for organizations and communities, their assumptions, application, relevance to human conditions throughout the world, strengths and limitations in working with culturally diverse populations, and empirical evidence to support their effectiveness. Offered every year on a regular basis.

SOWK 8116. Research Methods I. 3 hours.

Procedures for conceptualizing a research problem, developing a methodological approach, and providing an analysis plan. An emphasis is put on deduction and a monothetic approach that highlights quantitative analysis. The steps of scientific research methodology are reviewed and followed. Offered every year on a regular basis.

SOWK 8126. Research Methods II. 3 hours.

Prerequisite: SOWK 8116.

Principles and conduct of single-system research designs (SSRDs) as strategies for evaluating the outcomes of social work practice. Critical analysis of published examples of research in social work

and other disciplines which used SSRDs. Research on practice with individuals, groups, couples, families, organizations, and communities will be examined. Offered every year on a regular basis.

SOWK 8136. Methods for Community and Organizational Research. 3 hours.

Prerequisite: SOWK 8116 and permission of school.

Research methods, tools, and strategies for studies on communities and organizations. Offered every year on a regular basis.

SOWK 8146. Assessment of Measurement in Social Work. 3 hours.

Prerequisite: STAT 6210 or ERSK 6300 or PSYC 6410.

Application of psychometric theory and techniques to problems of issues involved in the practice of social work with individuals, families, groups, organizations, and communities. Offered every year on a regular basis.

SOWK 8156. Software for Social Work Research. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: SOWK 8116.

Students will master the use of selected software packages that are useful in carrying out independent research on social work issues. Non-Traditional Format: Independent research. Offered every year on a regular basis.

SOWK 8166. Qualitative Research Methods in Social Work. 3 hours.

Prerequisite: SOWK 8116.

Theories and methodologies of qualitative social work research, including ethnography, case study, interview, document analysis, and life history studies. The relationships between qualitative and other research traditions are examined. Techniques for data collection, analysis, and presentation are studied. Offered every year on a regular basis.

SOWK 8217. Philosophy of Science and Theory Development. 3 hours.

Issues in the philosophy of social science and approaches to the construction, development, and refinement theories undergirding the field of social work. Offered every year on a regular basis.

SOWK 8227. Doctoral Seminar. 3 hours.

Overview of social work education; the development, testing, and evaluation of knowledge for social work practice; accreditation of social work education programs; and professional associations supporting social work education. Offered every year on a regular basis.

SOWK 8237. Ethical Issues in Social Work Practice. 3 hours.

Basic theories and principles of ethics and their application to a variety of professional issues in

the delivery of human services. Attention to examination of major theories of ethics, their application in the analysis of dilemmas in practice, and research approaches for further study of ethical problems. Offered every year on a regular basis.

SOWK 8240. Dissertation Prospectus. 3 hours. Prerequisite: Admission to Doctoral Candidacy.

Directed study on preparing a doctoral dissertation prospectus. Offered every year on a regular basis.

SOWK 8306. Research Practicum. 2-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: SOWK 8116.

Application of research methods to social work practice, under faculty supervision. Experiences cover the conceptualization of problems through data collection, analysis, interpretation, and writing. Offered every year on a regular basis.

SOWK 9000. Doctoral Research. 1-6 hours. Repeatable for maximum 24 hours credit.

Prerequisite: Permission of school.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered every year on a regular basis.

SOWK 9105. Social Work Research Internship. 3-6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of school.

Practice research internship to apply research methods to the study of social work practice. Students develop and test social work interventions based on current theories and practice. Non-Traditional Format: Internship twenty-four hours per week. Offered every year on a regular basis.

SOWK 9300. Doctoral Dissertation. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of school.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered every year on a regular basis.

The College of Veterinary Medicine

Keith W. Prasse, Dean
(Veterinary Medicine Building)

The College of Veterinary Medicine offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. The major areas of concentration include anatomy (MS only), medical microbiology, parasitology, pathology, pharmacology, physiology and toxicology. A program is offered leading to the professional degree of Master of Avian Medicine for veterinary graduates desiring specialized training in the diagnosis, treatment, and prevention of poultry diseases. In many cases graduate programs are open both to veterinary graduates and to those with bachelor's degrees in appropriate areas.

Internship and residency programs for veterinary graduates are offered in small animal medicine, large animal medicine, surgery, neurology, ophthalmology, theriogenology, and radiology. Residents have the opportunity to work toward the MS or PhD degree in a basic science along with their clinical science training.

Details concerning specific admission or program requirements and options should be discussed with the appropriate department. General information regarding degree programs available in the College of Veterinary Medicine may be obtained from the Office of the Associate Dean for Research and Graduate Affairs, College of Veterinary Medicine.

Avian Medicine

Stanley H. Kleven, *Head*
Jean E. Sander, *Graduate Coordinator*,
542-5058
(Poultry Diagnostic and Research Center)

The Master of Avian Medicine is designed to provide veterinarians with specialized training in the diagnosis, treatment and prevention of poultry diseases. The degree is open to students who hold the Doctor of Veterinary Medicine degree.

AVMD 6050. Avian Diseases. 3 hours.
Prerequisite: Permission of department.
The signs of specific poultry diseases, their causes, and contributing management factors. Offered summer semester.

AVMD 6100. Clinical Avian Medicine. 3 hours.
Prerequisite: Permission of department.
Through study of case material, students learn to integrate laboratory test results into an accurate diagnosis. Appropriate treatment and prevention plans will be formulated. Offered spring semester.

AVMD 6120. Avian Medicine Clinical Rounds. 1 hour. One 1-hour lab period.
Prerequisite: Permission of department.
Faculty and students will discuss in detail clinical cases representing current avian disease problems. Offered spring semester.

AVMD 6140. Avian Necropsy. 1 hour. One 3-hour lab period.

Prerequisite: Permission of department.
Necropsy procedures applied to diagnosis of avian diseases. Use of necropsy case material to correlate function with structure; appropriate therapeutic and prophylactic measures are discussed and recommendations for clients determined. Problem-oriented medical records maintained for discussion and audit. Offered summer semester.

AVMD 6160. Poultry Disease and Management Interaction. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of department.
Interactions between current commercial management practices relative to their effect on poultry diseases. Actual field experiences are used in the identification of health problems and recommendations for improving flock health. Offered summer semester.

AVMD 6210. Avian Medicine Externship. 7 hours. Five 8-hour lab periods.

Prerequisite: Permission of department.
Independent off-campus experience working as a veterinarian in commercial poultry companies, allied industries, or diagnostic laboratories. Non-Traditional Format: Students in this course are off-campus and participate full time in the daily and weekly activities of their corporate or governmental sponsors. Offered fall semester.

AVMD 6800. Avian Pharmacology and Toxicology. 3 hours. Two 3-hour lab periods.

Prerequisite: Permission of department.
Chemistry, mechanisms of action, legal dosages, residue concerns, and analysis of antibiotics,

minerals, vitamins, anthelmintics, mycotoxins, and other naturally-occurring toxicants impacting commercial poultry production. Offered summer semester.

AVMD 7060. Avian Diagnostic Microbiology. 3 hours.

Prerequisite: Permission of department.

Intense practical experience in acquisition, handling, and processing of clinical microbiological specimens. Areas covered include processing techniques, culture techniques, media selection, screening methods, interpretation of cultures, traditional and rapid identification methods, antimicrobial sensitivity testing, special recovery and enrichment techniques, hatchery microbiology, HACCP and processing. Offered spring semester.

AVMD 7060L. Avian Diagnostic Microbiology Laboratory. 1 hour. Two 1.5-hour lab periods.

Prerequisite: Permission of department.

Corequisite: AVMD 7060.

Laboratory to be taken in conjunction with Avian Diagnostic Microbiology. The laboratory will apply techniques discussed in lectures. Offered spring semester.

AVMD 8050. Avian Virus Diseases. 3 hours.

Prerequisite: Permission of department.

The serological and virological methods used to isolate and identify avian viruses of economic importance. Cell culture systems are prepared and infected with different viruses to observe their effect. Specific projects are undertaken to familiarize the student with current virological techniques. Offered fall semester.

AVMD 8050L. Avian Virus Diseases Laboratory. 1 hour. Two 1.5-hour lab periods.

Prerequisite: AVMD 8050 or permission of department.

Prerequisite or corequisite: AVMD 8050.

Laboratory to be taken in conjunction with Avian Virus Diseases. The laboratory will apply techniques discussed in lecture to identify viruses of importance to poultry. Offered fall semester.

AVMD 8110. Problems in Poultry Diseases and Parasites. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of department.

Students work intensively on approved problems in the field of poultry health after selection of the specialized area with the appropriate staff member. Offered summer semester.

AVMD 8150. Avian Medicine Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Presentation and discussion of current diagnostic cases and research activities in the area of avian medicine. Offered fall and spring semesters.

(AVMD)VPAT 8220. Avian Histopathology. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of department.

Detailed microscopic studies will be made of avian tissues and the effects of specific diseases and their processes on them. A working knowledge of tissue processing and differential staining will be included. Offered fall semester.

Medical Microbiology and Parasitology

Richard E. Wooley, *Head*

Donald L. Dawe, *Graduate Coordinator,*
542-5793

(Veterinary Medicine Building)

Graduate work is offered in medical microbiology and parasitology leading to the MS and PhD degrees. Areas of specialization include biology of pathogenic microorganisms; immunology; animal virology; infectious diseases of mammals, avian, or fish; molecular biology, chemotherapy, immunology of parasitic protozoa and helminths as well as various aspects of wildlife diseases. An MS degree is also offered in an epidemiology specialization. Two types of students are accepted for graduate training: those with BS or MS degrees and those with DVM degrees.

Instruction is coordinated with course offerings in departments of the College of Arts and Sciences and the College of Agricultural and Environmental Sciences. The statistics and computer science departments are involved in the epidemiology program of study. Suitable courses in these departments are included in students' programs of study. Instruction in infectious diseases is coordinated with work in other departments within the College of Veterinary Medicine, the Poultry Diagnostic Research Center, and regional/federal research facilities.

Medical Microbiology

MMIB 4100/6100-4100L/6100L. Medical Immunology. 3 hours. Three lectures and one 3-hour lab period.

Not open to students with credit in CBIO(MIBO) 4100/6100.

Prerequisite: MIBO 3500 and BCMB(BIOL) (CHEM) 3100.

The mechanism of the immune response, host resistance to infection, serologic testing methods, and in vitro cellular testing procedures. Offered fall semester.

MMIB 4220/6220. Pathogenic Bacteriology. 3.3 hours.

The morphological, physiological, and pathogenic mechanisms of the important pathogenic bacterial agents; their relation to health and disease. Offered on a regular basis.

MMIB 4390/6390-4390L/6390L. Clinical Diagnostic Microbiology. 3 hours. Three lectures and two 2-hour lab periods.

Prerequisite: MMIB 4220/6220.

The application of basic diagnostic problems associated with the recovery of disease organisms from clinical material. Methodology and problems involved in laboratory isolation and identification. Methods will also include molecular and automated applications. Offered spring semester.

MMIB 4450/6450. Molecular Bacteriology. 3 hours.

Not open to students with credit in MIBO 4800L/6800L.

Prerequisite: MIBO 3500.

Techniques involved in identifying bacterial genes and discerning their function. The general principles behind cloning, nucleic acid hybridizations, and PCR. Issues concerning scientific integrity and patent issues. Offered fall semester.

MMIB 4500/6500-4500L/6500L. Virology. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: [MIBO 3500 and BCMB(BIOL) (CHEM) 3100] or permission of department.

The basic principles and concepts of virology. The major emphasis will be on vertebrate viruses. Subjects covered in this course include classification, replication, diagnosis, quantification, pathogenesis, epidemiology, and viral neoplasia. Offered spring semester.

MMIB 4800/6800. Environmental Epidemiology. 3 hours.

Prerequisite: Permission of department.

The basics of epidemiology, relying on the Principles of Epidemiology Homestudy Manual from the Centers for Disease Control and Prevention. Utilizing this manual and lecture material, the students will understand how to incorporate epidemiologic tools into handling environmental

health related concerns; topical infectious diseases. Offered spring semester.

MMIB 7000. Master's Research. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MMIB 7300. Master's Thesis. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Not offered on a regular basis.

MMIB 8160. Seminar in Medical Microbiology. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Semi-formal meetings for discussion of research and new developments in the field. Attendance is required of all Medical Microbiology graduate students. Offered fall, spring, and summer semesters.

MMIB(MIBO) 8200. Pathogenic and Molecular Microbiology. 5 hours.

Prerequisite: MMIB 4220/6220 and BCMB 4020/6020.

Medical pathogens emphasizing molecular techniques. Offered fall semester.

MMIB 8210. Experimental Procedures in Microbial Pathogenesis. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: BCMB 8020 or permission of department.

Experimental procedures for the study of microbial virulence mechanisms. Basic laboratory techniques involved in the identification, isolation, and characterization of molecular factors responsible for microbial survival and virulence within a host. Offered spring semester.

MMIB(MIBO) 8230. Special Topics in Microbial Pathogenesis. 2 hours. Repeatable for maximum 4 hours credit.

Presentation and discussion of published research and new developments in microbial pathogenesis. Offered fall and spring semesters.

MMIB 8300-8300L. Advanced Immunology II. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of department.

Molecular immunology of signal transduction; T-cell, B-cell and NK cell regulation by MHC class I and II antigens; mechanisms of apoptosis; peptide processing and presentation. Lectures presented from recent research literature. Laboratory encourages graduate student involvement of their own research, with emphasis on

flow cytometry and other analytical approaches. Offered spring semester of even-numbered years.

MMIB 8350-8350L. Principles and Research Applications of Flow Cytometry. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of department.

Theory and research applications of flow cytometry. Flow cytometry as it relates to immunophenotyping, cell cycle analysis, innovative procedures measuring apoptosis, and simultaneous four color analysis. Students will become independent regarding instrumentation, collection of data, analysis, etc. Hands-on experience will be obtained utilizing state-of-the-art instruments. Offered spring semester of odd-numbered years.

MMIB 8500. Animal Virology. 3 hours.

Prerequisite: MMIB 4500/6500-4500L/6500L.

Virus/cell interactions, with emphasis on molecular and genetic aspects of disease or tumor production by animal viruses. The use of molecular techniques in the diagnosis, epidemiology, and pathogenesis of viral diseases will be addressed using current literature as the basis for discussion. Offered fall semester.

MMIB 8900. Problems in Medical Microbiology. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Intensive study, under the direction of staff members, on approved problems in medical microbiology. Non-Traditional Format: Directed study. Offered fall, spring, and summer semesters.

MMIB 9000. Doctoral Research. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

MMIB 9300. Doctoral Dissertation. 1-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Parasitology

PARA 7000. Master's Research. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the

direction of a faculty member. Offered fall, spring, and summer semesters.

PARA 7300. Master's Thesis. 1-15 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

PARA 8030. Helminthology. 3 hours. One lecture and four 2-hour lab periods.

Prerequisite: Permission of department.

The morphology, life histories, classification, and parasitic relationship of the helminths. Emphasis is placed on recent advances in helminthology research. Offered spring semester of odd-numbered years.

PARA 8050. Problems in Parasitology. 1-3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Parasitic diseases of birds and mammals. Nature of the studies determined by the student's major field of interest. Non-Traditional Format: No traditional classes are held. Faculty members assist students as needed. Offered fall, spring, and summer semesters.

PARA 8060L. Techniques in Experimental Parasitology. 4 hours. Four 2-hour lab periods.

Prerequisite: Permission of department.

Techniques necessary for in vivo and/or in vitro cultivation and maintenance of the life cycle of selected helminth, arthropod, and protozoan parasites will be employed. Offered summer semester of odd-numbered years.

PARA 8080L. Advanced Techniques in Molecular Parasitology. 3 hours. Two 3-hour lab periods.

Current techniques in molecular parasitology. Emphasis is placed on procedures for genomic analysis, rapid isolation and characterization of parasite molecules, and the detection and identification of parasites in host and vector. Offered summer semester of odd-numbered years.

PARA 8090-8090L. Parasitic Protozoa. 3.5 hours. Two lectures and one 3-hour lab period.

Prerequisite: Permission of department.

Current topics in the morphology, life histories, classification, and host/parasite interactions of protozoan parasites of man and lower animals. Offered spring semester of even-numbered years.

PARA 8250. Special Topics in Parasitology. 1 hour. Repeatable for maximum 4 hours credit.

Published research and new developments in the study of parasites, their hosts and vectors. Offered fall, spring, and summer semesters.

(PARA)FORS 8500-8500L. Diseases of Wildlife I. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: FORS(PARA) 8510-8510L.

Fundamental causes of disease-induced morbidity and mortality among free-ranging wildlife populations. Etiology, pathogenesis, clinical signs, lesions, epidemiology, diagnosis, and management significance of diseases produced by viral and microbial pathogens. Offered summer semester.

(PARA)FORS 8510-8510L. Diseases of Wildlife II. 5 hours. Three lectures and two 3-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: FORS(PARA) 8500-8500L.

Fundamental causes of disease-induced morbidity and mortality among free-ranging wildlife populations. Emphasis is on the etiology, pathogenesis, clinical signs, lesions, epidemiology, diagnosis, and management significance of diseases of parasitic, toxicologic, or miscellaneous etiologies. Offered summer semester.

(PARA)CBIO(POUL) 8560. Seminar in Parasitology. 1 hour. Repeatable for maximum 3 hours credit. One 1-hour lab period.

Weekly discussion of parasitological topics. Not offered on a regular basis.

PARA 8570. Seminar in Parasitology. 1 hour. Repeatable for maximum 6 hours credit.

Weekly meeting devoted to discussion of parasitologic subjects. Non-Traditional Format: A/F grading will be used when a student presents a seminar of her or his own work. S/U grading will be used when a student does not present, but does attend, the seminar series. Offered fall, spring, and summer semesters.

PARA 8580. Current Topics in Wildlife Health. 1 hour. Repeatable for maximum 5 hours credit. One 2-hour lab period.

Prerequisite: Permission of department.

Ongoing disease investigations, research, and wildlife health issues of national interest will be reviewed and discussed in a bi-weekly review of SCWDS activities. Students will participate in the discussion and may be asked to report further information to the group at the next session. Non-Traditional Format: The class will meet for a two-hour session of discussion every other week associated with the Diagnostic and Research Meeting of the Southeastern Cooperative Wildlife Disease Study. The students are expected to use two hours on "off" weeks gathering information for use in discussion sessions. Offered fall, spring, and summer semesters.

PARA 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 45 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

PARA 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Pathology

Corrie C. Brown, *Head*

Jaroslava Halper, *Graduate Coordinator*,
542-5830

(Veterinary Medicine Building)

Graduate study leading to the MS or PhD degrees in veterinary pathology with emphasis in either anatomic or clinical pathology is offered by the department. Dissertation opportunities exist in the areas of growth factors, leukocyte pathobiology, infectious diseases, cellular immuno-pathobiology, wildlife diseases, avian pathology including diseases of exotic species, and immynodeficiency diseases.

Applicants for graduate study are accepted to begin preferably in the fall semester. Prospective students usually have the DVM degree.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

(VPAT)BIOL(CBIO) 5040/7040. Electron Microscopy. 3 hours.

Prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L.

Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray microanalysis, image processing, and image analysis. Offered fall semester.

VPAT 7000. Master's Research. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPAT 7010. Necropsy Practicum. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Necropsy diagnosis of diseases of animals via gross and microscopic examination of tissues. Non-Traditional Format: Student works with necropsy pathologist on diagnostic necropsy cases. Offered fall, spring, and summer semesters.

VPAT 7020. Biopsy Practicum. 1-3 hours. Repeatable for maximum 6 hours credit.

The diagnosis of diseases of animals by biopsy techniques. Studies are made of microscopic alterations of tissue submitted for antemortem diagnosis. Non-Traditional Format: Student works with biopsy pathologist on clinic biopsy cases. Offered fall, spring, and summer semesters.

VPAT 7030. Cytology Practicum. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by cytologic techniques. Studies are made of cytologic preparations prepared from fluids and tissues submitted for antemortem diagnosis. Non-Traditional Format: Student works with clinical pathologist on cytology cases. Offered fall, spring, and summer semesters.

VPAT 7200-7200L. General Animal Pathology. 3.7 hours. Three lectures and one 1-hour lab period.

Prerequisite: Permission of department.

The reaction of the body to disease processes, specifically disturbances of circulation, cell injury, inflammation, and disturbances of growth. Recognizing lesions grossly and microscopically, determining the pathogenesis of the lesions, and making lesion and disease diagnoses. Non-Traditional Format: Computer assisted interactive programs. Offered fall semester.

VPAT 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

VPAT 8000. Pathology Rounds. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

The presentation of complete case studies in weekly clinical pathology and histopathology rounds. Non-Traditional Format: Student participates in weekly clinical pathology and histopathology rounds. Offered fall and spring semesters.

VPAT 8020. Cellular Pathology. 4 hours.

Prerequisite: Permission of department.

The response of the body to disease. Fine structural and molecular changes; includes mechanisms of cellular injury, carcinogenesis, and mechanisms of neoplasia and the inflammatory process. Not offered on a regular basis.

VPAT 8050. Problems in Veterinary Pathology. 2-5 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Disease problems of both birds and mammals. The nature of the studies will be determined by the student's major field of interest. Non-Traditional Format: Student works with department faculty mentor on disease problems of birds or mammals. Offered fall, spring, and summer semesters.

VPAT 8070-8070L. Veterinary Hematology. 3 hours. Two lectures and one 3-hour lab period.

The morphology, physiology and pathology of the blood and blood-forming tissues. The laboratory will emphasize the morphology of normal and abnormal blood and bone marrow of domestic animals. Not offered on a regular basis.

VPAT 8100. Microscopic Pathology. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

The microscopic features of diseases of domestic animals with emphasis on writing lesion descriptions and diagnosis. Not offered on a regular basis.

VPAT 8120. Seminars in Laboratory Clinical Biochemistry. 1-3 hours.

Prerequisite: Permission of department.

Test methodology with brief reviews of related pathophysiologic mechanisms, clinical applications, and species differences. Principles of instrumentation, quality control, methodology, and interpretation of specific tests for diagnosis of animal diseases, e.g., enzymology assays, specific tests related to hepatic function and renal function, protein analysis, and endocrine related assays. Non-Traditional Format: Student will participate in seminars on laboratory clinical biochemistry. Not offered on a regular basis.

VPAT 8130. Diagnostic Oncology. 3 hours. Three 2-hour lab periods.

Prerequisite: VPAT 8100 or permission of department.

The microscopic features of neoplasms of domestic animals. The identification and characteri-

zation of the various tumors. Not offered on a regular basis.

VPAT 8140. Seminar in Veterinary Pathology. 1-2 hours. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

The review and discussion of basic problems and diseases currently or potentially important in the field of veterinary medicine. Non-Traditional Format: Participation via attendance and presentation in research seminars. Offered fall and spring semesters.

VPAT(AVMD) 8220. Avian Histopathology. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of department.

Detailed microscopic studies will be made of avian tissues and the effects of specific diseases and their processes on them. A working knowledge of tissue processing and differential staining will be included. Offered fall semester.

VPAT 8320. Pathology of Laboratory Animals. 3 hours.

Prerequisite: Permission of department.

The etiology, tissue alterations, both macroscopic and microscopic, of diseases of the common laboratory animals. Biological profile of each major species of laboratory animals. Non-Traditional Format: Lectures and laboratories concerning the diseases of laboratory animals. Not offered on a regular basis.

VPAT 9000. Doctoral Research. 1-10 hours. Repeatable for maximum 40 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPAT 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Physiology and Pharmacology

Thomas F. Murray, *Head*
Frederick N. Thompson, Jr., *Graduate*
Coordinator, 542-5862
(Veterinary Medicine Building)

The Department of Physiology and Pharmacology offers MS and PhD degrees in physiology and pharmacology. Programs of study encompass the disciplines of physiology, pharmacology, and toxicology with opportunities to concentrate on molecular biology, basic mechanisms of physiologic and pharmacologic processes, specific organ systems, or clinical problems. Graduates of these programs are employed by universities and by a variety of companies in the private sector.

Candidates for the MS or PhD degrees must have a baccalaureate or a Doctor of Veterinary Medicine (DVM) or equivalent degree from an accredited college or university. Requirements for admission include 1) a grade point average of 3.25 with a BS or MS degree, or ranked in the upper half of the class DVM or equivalent degree; and 2) completion of the Graduate Record Examination with a minimum score of 1100 on the verbal and quantitative portions.

Certain minimum requirements in addition to those required by the Graduate School must be met. For the PhD degree, any undergraduate deficiencies in biologic sciences, chemistry, mathematics, or physics must be resolved early in a program of study.

The graduate programs include fulfillment of course requirements, research skills, and completion of a thesis or dissertation. Faculty of the department may be consulted about specific requirements.

For a description of the MS and PhD interdisciplinary program in toxicology, see the section in this bulletin entitled, "General Degrees: Interdisciplinary Program."

VPHY 6050. Animal Physiological Chemistry. 2 hours.

Chemistry of cellular constituents and an introduction to the chemical process of living systems. Integrated functional aspects of the metabolic respiratory and transport systems of the animal body from a chemical standpoint. Offered fall semester of odd-numbered years.

VPHY 6090. Comparative Mammalian Physiology. 3 hours.

The animal body as a single functioning organism, including neurophysiology, cardiovascular and respiratory physiology. Offered fall semester.

VPHY 6100. Comparative Mammalian Physiology. 3 hours.

The animal body as a single functioning organism, including endocrinology, reproduction, renal, and alimentary physiology. Offered spring semester.

(VPHY)PHRM 6910. Introductory Toxicology. 3 hours.

Basic toxicology principles, including dose-response relationships, principles of toxicity and safety evaluation, pharmacokinetics and metabolism of chemicals, basic mechanisms of cellular injury, factors influencing toxicity, carcinogenesis/mutagenesis, governmental regulations, and exposure and risk assessment. Offered fall semester.

VPHY 6930. Research Methods. 1-3 hours. Repeatable for maximum 3 hours credit. 1-3 lab periods of 3-9 hours per week.

One to three laboratory rotations in the Department of Physiology and Pharmacology. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

VPHY 7000. Master's Research/Physiology. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 7010. Master's Research/Pharmacology. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 7020. Master's Research/Pharmacology and Toxicology Emphasis. 1-10 hours. Repeatable for maximum 30 hours credit.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring, and summer semesters.

VPHY 8000. Cardiovascular Physiology. 2 hours.

Prerequisite: VPHY 6090.

Advanced study of current concepts in cardiovascular physiology. Offered spring semester of odd-numbered years.

VPHY 8010. Mammalian Cell Physiology. 3.3 hours.

The physiology of the mammalian cell. Offered fall semester.

VPHY 8080. Ruminant Physiology. 3 hours.

The physiological, biochemical, and microbiological processes of digestion, absorption, and metabolism of absorbed nutrients. Offered fall semester of even-numbered years.

VPHY 8100. Comparative Medical Endocrinology. 2 hours.

Prerequisite: VPHY 6100.

Advanced study of current concepts in mammalian endocrinology. Offered summer semester of even-numbered years.

VPHY 8120. Renal and Fluid-Electrolyte Physiology: Body Electrolyte and Mineral Homeostasis and Renal Functions. 2 hours.

Prerequisite: VPHY 6100.

Current concepts in fluid-electrolyte physiology and renal function. Offered summer semester of even-numbered years.

VPHY 8200. Animal Molecular Biology: Concepts and Current Literature. 2 hours.

Lectures and discussion on current research topics in molecular biology pertaining to veterinary medicine and livestock production. Offered spring semester.

VPHY 8400. Neurophysiology. 2 hours.

The nervous system stressing cellular physiology of the nervous system and how changes in cellular physiology impact behavior. Offered fall semester of odd-numbered years.

VPHY 8450. Advanced Clinical Pharmacology. 2 hours.

Presentation and discussion of current knowledge of chemotherapeutic agents and their clinical evaluation. Offered spring semester of odd-numbered years.

VPHY 8460. Molecular Pharmacology. 3 hours.

Prerequisite: VPHY 5200 or PHRM 6410.

The interaction of drugs with tissue receptors, and the absorption, distribution, metabolism, and elimination of drugs by the organism, and molecular carcinogenesis. Course may be taken through UGA Studies Abroad program in Pharmacology and Toxicology (Pharmacy). Offered spring semester of even-numbered years.

VPHY 8900. Physiology-Pharmacology Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Current research findings and methodology in physiology, pharmacology, or toxicology. Offered fall, spring, and summer semesters.

(VPHY)PHRM 8910. Organ Systems Toxicology I. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the blood, respiratory systems, nervous system, kidneys and the cardiovascular system. Offered fall semester of even-numbered years.

(VPHY)PHRM(POUL) 8920. Organ Systems Toxicology II. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the liver, carcinogenesis/mutagenesis, immune system, reproductive system, skin, and eyes. Offered spring semester of odd-numbered years.

(VPHY)(EHSC)PHRM(POUL) 8930. Chemical Toxicology. 3 hours.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Chemical contamination of air, water, and food by major agricultural and industrial chemicals. Emphasis will be placed on sources of contamination, fate of chemicals in the environment, target species, health effects, chemical analyses, and contamination control. Offered spring semester.

VPHY 9000. Doctoral Research Physiology. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 9010. Doctoral Research in Pharmacology. 1-10 hours. Repeatable for maximum 30 hours credit.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 9020. Doctoral Research Toxicology. 1-10 hours. Repeatable for maximum 30 hours credit.

Research while enrolled for a doctoral degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring, and summer semesters.

VPHY 9300. Doctoral Dissertation. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department. Dissertation writing under the direction of the major professor. Non-Traditional Format: Independent research and preparation of the doctoral dissertation. Offered fall, spring, and summer semesters.

Small Animal Medicine

Clarence A. Rawlings, *Head and Graduate Coordinator,*
542-6385
(Veterinary Medicine Building)

The Department of Small Animal Medicine does not have a graduate degree program. Clinical internships and residency programs are offered. Residents are enrolled in graduate degree programs of other departments in the college.

SAMS 6310. Acute Pathophysiology. 1-5-3 hours. Repeatable for maximum 3 hours credit. Prerequisite: DVM degree or permission of department.

The pathophysiology of patients which are critically ill or injured will be discussed. Emphasis will be placed on applying these principles of pathophysiology to understanding the mechanism and response to therapy of syndromes involving the critical patient. Course format will be that of lecture, seminar, and literature review. Offered fall and spring semesters.

SAMS 6990. Special Problems. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: DVM or equivalent degree. Problems defined by a small animal faculty member with the student, with approval of the department head, will be studied. These are usually focused studies or projects by veterinarians entered in a clinical residency program. Offered fall, spring, and summer semesters.

SAMS 8010. Seminar in Medicine and Surgery. 7-2 hours. Repeatable for maximum 2 hours credit.

Prerequisite: DVM degree or equivalent and permission of department.

Graduate students and staff members will regularly participate in review and discussion of current research findings and methodology concerning medical and surgical disorders of animals. Offered fall and spring semesters.

Veterinary Anatomy and Radiology

Royce E. Roberts, *Head*
Sharon L. Crowell-Davis, *Graduate Coordinator, 542-8343*
(Veterinary Medicine Building)

Veterinary anatomy currently offers the MS degree. The program is available to all qualified students holding professional degrees in the healing arts as well as to graduate students having a strong biological background. Programs of study are available in the general area of microscopic and gross anatomy, embryology, neuroanatomy, electron microscopy, and radiology. All programs are strongly slanted toward a comparative approach and students are not limited to a particular species for research purposes.

Students interested in comparative anatomical study programs should contact this department directly to determine specific requirements.

VARB 4030L/6030L. Veterinary Histology. 3 hours.

Prerequisite: Permission of department.

Veterinary applications of microscopic structure and organization of the tissues of domestic animals. Not offered on a regular basis.

VARB 6070. Neuroanatomy of Domestic Animals. 3 hours.

Prerequisite: Permission of department.

The gross, microscopic, and ultrastructural aspects of neuroanatomy presented from a comparative viewpoint, using the dog as the basic animal. Open to qualified graduate or undergraduate students in the biological sciences. Not offered on a regular basis.

VARB 7000. Master's Research. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members. Non-Traditional Format: Independent research under the direction of a faculty member. Offered fall, spring and summer semesters.

VARB 7110. Practicum in Teaching Gross Anatomy. 4 hours.

Prerequisite: VARB 5120 or VARB 5130 or VARB 5160 or VARB 7120 or VARB 7130 or VARB 7160 or permission of department.

The preparation and presentation of lectures and laboratory instruction on the gross anatomy of the dog and cat. Various methods of presentation of subject matter and student evaluation. Non-Traditional Format: Practicum. Not offered on a regular basis.

VARB 7120. Laboratory in Anatomy of the Horse. 3.7 hours.

Prerequisite: Permission of department.

Gross anatomy of the horse correlated with palpation of the live animal and radiographic anatomy with comparison to the dog, cat, and food animals. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis. Non-Traditional Format: Designated meeting times vary from week to week based on agreed upon times by the instructor and the student. Not offered on a regular basis.

VARB 7130. Laboratory in Anatomy of Food Animals. 3.7 hours.

Prerequisite: Permission of department.

Gross anatomy of food animals, mainly by dissection, correlated with palpation of the live animal and radiographic anatomy with comparison made to the dog, cat, and horse. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis. Non-Traditional Format: Varied meeting times agreed upon by the instructor and the student. Not offered on a regular basis.

VARB 7140. Veterinary Animal Behavior. 1.3 hours.

Prerequisite: Permission of department.

Diagnosis of treatment of common animal behavior problems. Not offered on a regular basis.

VARB 7150. Principles of Veterinary Anatomy. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Anatomic principles of each system of domestic animals. Not offered on a regular basis.

VARB 7160. Laboratory in Anatomy of the Dog and Cat. 3.7 hours.

Prerequisite: VARB 5150 or VARB 7150.

Gross anatomy of the dog and cat correlated with palpation of the live animal and radiographic anatomy with comparison to the horse and food animals. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis. Non-Traditional Format: Meets at varying times and dates agreed upon by the student and professor. Not offered on a regular basis.

VARB 7300. Master's Thesis. 1-10 hours. Repeatable for maximum 30 hours credit.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor. Non-Traditional Format: Independent research and thesis preparation. Offered fall, spring and summer semesters.

VARB 7340. Clinical Problems of Animal Behavior. 1-5 hours. Repeatable for maximum 20 hours credit.

Prerequisite: Permission of department.

The diagnosis and treatment of animals with behavior problems. Review of literature on current cases. Non-Traditional Format: Variety of labs held dependent upon need, research, at various times each week. Not offered on a regular basis.

VARB 8010. Problems in Veterinary Anatomy. 1-5 hours. Repeatable for maximum 10 hours credit.

Designed to allow graduate students the opportunity to explore, under supervision, anatomical problems of their choice. These may be in areas of gross or microscopic anatomy. Open to graduate students in the biological sciences meeting the course prerequisites. Non-Traditional Format: Varies according to need. Not offered on a regular basis.

VARB 8030. Advanced Veterinary Histology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (VARB 5170 and VARB 5180-5180L) or permission of department.

Histological variations in the structure of organ systems of domestic animals. Functional aspects based on comparative morphology will be stressed. Open to all qualified graduate students in any area of the biological sciences. Not offered on a regular basis.

VARB 8050. Special Radiographic Procedures. 3 hours.

Prerequisite: VARB 5310.

The methods and interpretation of special radiographic procedures. These findings are correlated with survey radiography. Not offered on a regular basis.

VARB 8100. Fine Structure of Animal Tissues. 4 hours.

Prerequisite: CBIO 4000/6000-4000L/6000L and permission of department.

The electron microscope and related techniques to the understanding of tissue fine structure. Em-

phasis will be placed on giving the student a basis for interpretation of electron micrographs in a variety of animal tissues. Cellular and intracellular morphologic specializations will be related to the function of the tissue or organ. Not offered on a regular basis.

VARB 8340. Seminar in Applied and Domestic Animal Behavior. 1-5 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

The evaluation of research, development of theory, and practical applications of research on animal behavior, or a recent book on the subject will be evaluated. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered on a regular basis.

VARB 9340. Practicum in Clinical Animal Behavior. 1-10 hours. Repeatable for maximum 20 hours credit.

Prerequisite: VARB 7340 and permission of department.

Diagnosis and treatment of animals with behavior problems. Includes pharmacologic, surgical, and behavior modification treatment techniques. Non-Traditional Format: Faculty and students meet at various times, both daily and weekly. Not offered on a regular basis.

Veterinary Medicine

VETM 7100. Veterinary Ethics and Jurisprudence. Repeatable for maximum 1.4 hour credit.

Veterinary medical ethics and the basic laws and regulations governing veterinary medicine. Non-Traditional Format: Taught in a sequential curriculum format; time varies each week. Offered fall semester.

Graduate Faculty



Graduate Faculty

Ex-Officio Members

- Adams, Michael F., *President of the University*
Ph.D., Ohio State
- Key, Joe L., *Vice President for Research and Research Professor of Botany*
Ph.D., Illinois (Urbana-Champaign)
- Prokasy, William F., *Vice President for Academic Affairs and Professor of Psychology*
Ph.D., Wisconsin (Madison)
- Younts, S. Eugene, *Vice President for Services and Professor of Crop and Soil Sciences*
Ph.D., Cornell
- Potter, William Gray, *Director of the Libraries*
Ph.D., Illinois (Urbana-Champaign)
- Anderson, Wyatt W., *Dean of the College of Arts & Sciences and Alumni Foundation Distinguished Professor of Genetics*
Ph.D., Rockefeller
- Benson, P. George, *Dean of The Terry College of Business and Professor of Economics*
Ph.D., Florida
- Buchanan, Gale A., *Dean and Director of the College of Agricultural and Environmental Sciences and Professor of Crop and Soil Sciences*
Ph.D., Iowa
- Crowley, John F. III, *Dean of the School of Environmental Design and Constance Knowles Draper Professor of Environmental Design*
Ph.D., Oklahoma (Norman)
- Feldman, Stuart, *Dean of the College of Pharmacy and Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., State University of New York (Buffalo)
- Mace, Arnett C., Jr., *Dean of the School of Forest Resources, Professor of Forest Resources and Associate Director of Forestry Research College*
Ph.D., Arizona
- Nickols, Sharon Y., *Dean of the College of Family and Consumer Sciences and Professor of Housing and Consumer Economics*
Ph.D., Missouri (Columbia)
- Patel, Gordhan L., *Dean of the Graduate School and Professor of Cellular Biology and Biochemistry and Molecular Biology*
Ph.D., Washington University (St. Louis)
- Prasse, Keith William, *Dean of the College of Veterinary Medicine and Professor of Pathology*
Ph.D., Iowa State
- Russell, John Thomas, *Dean of the College of Journalism and Mass Communication and Professor of Advertising/Public Relations*
Ph.D., Illinois (Urbana-Champaign)
- Spurgeon, Edward D., *Dean of the School of Law and Professor of Law*
L.L.M., Stanford
- Yeany, Russell H. Jr., *Dean of the College of Education and Professor of Science Education*
Ph.D., Colorado (Boulder)
- Yegidis, Bonnie L., *Dean of the School of Social Work and Professor of Social Work*
Ph.D., South Florida

Appointed Members*

Adams, Malcolm R., *Professor of Mathematics*
Ph.D., Massachusetts Institute of Technology

Adams, Michael W., *Research Professor of Biochemistry and Molecular Biology and Adjunct Professor of Microbiology*
Ph.D., London

Adams, Nigel Graham, *Research Professor of Chemistry*
D.Sc., Birmingham

Adang, Michael J., *Professor of Entomology*
Ph.D., Washington State

Adriano, Domy C., *Professor of Crop and Soil Sciences and Senior Research Scientist at the Savannah River Ecology Lab*
Ph.D., Kansas State

Affolter, James Martin, *Assistant Professor of Horticulture*
Ph.D., Michigan (Ann Arbor)

Agee, William Hugh, *Professor of Language Education*
Ph.D., Florida State

Ainsworth, Scott H., *Associate Professor of Political Science*
Ph.D., Washington University

Akin, Danny Earl, *Adjunct Professor of Crop and Soil Sciences and Textiles, Merchandising and Interiors*
Ph.D., Georgia

Akoh, Casimir C., *Associate Professor of Food Science and Technology and Adjunct Associate Professor of Foods and Nutrition*
Ph.D., Washington State

Albersheim, Peter, *Research Professor of Biochemistry and Molecular Biology, Botany, Chemistry and Plant Pathology and Co-Director for the Center of Complex Carbohydrate Research*
Ph.D., California Institute of Technology

Alexander, Alison F., *Professor and Department Head of Telecommunications and Director of Olympic Host Broadcast Training Program*
Ph.D., Ohio State

Alexeev, Valery, *Associate Professor of Mathematics*
Ph.D., Moscow M.V. Lomonosov State University

All, John Norman, *Professor of Entomology*
Ph.D., Wisconsin (Madison)

Allen, Christopher S., *Associate Professor of Political Science*
Ph.D., Brandeis

Allen, Joseph Dana, III, *Professor and Department Head of Psychology*
Ph.D., Southern Illinois (Carbondale)

Allen, Joyce E., *Professor and Department Head of Language Education*
Ed.D., Kansas

Alexsaht-Snyder, Martha, *Associate Professor of Elementary Education*
Ph.D., California (Santa Barbara)

Allinger, Norman Louis, *Research Professor of Chemistry and Director of the Computational Center for Molecular Structure and Design*
Ph.D., California (Los Angeles)

Allison, James Madison, *Professor of Biological and Agricultural Engineering and Associate Director of the College of Agricultural and Environmental Sciences Academic Programs*
Ph.D., Cornell

Alvarez, Jose B. IV, *Assistant Professor of Romance Languages*
Ph.D., Arkansas State

Alvarez, Leonardo, *Associate Professor of Environmental Design*
M.L.A., Harvard

Alvermann, Donna E., *Research Professor of Reading Education*
Ph.D., Syracuse

Amason, Allen C., *Assistant Professor of Management*
Ph.D., South Carolina (Columbia)

Ames, Glenn Clifford Webster, *Professor of Agricultural and Applied Economics*
Ph.D., Tennessee (Knoxville)

Amos, Henry E., *Professor of Animal and Dairy Science*
Ph.D., Kentucky

Amster, I. Jonathan, *Associate Professor of Chemistry*
Ph.D., Cornell

*Membership as of April 1, 1998

- Anderson, Douglas A., *Professor of English*
Ph.D., Virginia
- Anderson, James C., Jr., *General Sandy Beaver Teaching Professor of Classics*
Ph.D., North Carolina (Chapel Hill)
- Anderson, James L., *Professor of Chemistry*
Ph.D., Wisconsin (Madison)
- Anderson, Robert Leonard, *Professor of Physics and Associate Dean of the College of Arts & Sciences*
Ph.D., Wayne State
- Anderson, Wyatt W., *Alumni Foundation Distinguished Professor of Genetics and Dean of College of Arts & Sciences*
Ph.D., Rockefeller
- Annis, Patricia A., *Associate Professor of Textiles, Merchandising & Interiors*
Ph.D., Kansas State
- Arabnia, Hamid R., *Associate Professor of Computer Science*
Ph.D., Kent (Canterbury)
- Arias, Ileana, *Professor of English*
Ph.D., State University of New York (Stony Brook)
- Armitage, Allan Munro, *Professor of Horticulture*
Ph.D., Michigan State
- Arnold, Jonathan, *Associate Professor of Genetics and Adjunct Associate Professor of Statistics*
Ph.D., Yale
- Arnold, Michael L., *Associate Professor of Genetics and Adjunct Associate Professor of Botany*
Ph.D., Australian National
- Aron, Dennis N., *Professor of Small Animal Medicine*
D.V.M., Ohio State
- Aronson, Jay E., *Associate Professor of Management*
Ph.D., Carnegie-Mellon
- Asmussen, Marjorie Ann, *Professor of Genetics and Mathematics*
Ph.D., Stanford
- Assaf, Francis Beshara, *Professor of Romance Languages*
Ph.D., California (Berkeley)
- Atkinson, Scott E., *Professor of Economics*
Ph.D., Colorado (Boulder)
- Atwater, Mary M., *Professor of Science Education and Adjunct Professor of Social Science Education*
Ph.D., North Carolina (Chapel Hill)
- Avisé, John Charles, *Research Professor of Genetics*
Ph.D., California (Davis)
- Azain, Michael J., *Associate Professor of Animal and Dairy Science and Adjunct Associate Professor of Foods and Nutrition*
Ph.D., Oklahoma
- Azoff, Edward Arthur, *Professor of Mathematics*
Ph.D., Michigan (Ann Arbor)
- Babcock, Lucia M., *Associate Professor of Chemistry*
Ph.D., City University of New York (Brooklyn)
- Bachtel, Douglas Charles, *Professor of Housing and Consumer Economics*
Ph.D., Ohio State
- Bacon, Charles W., *Adjunct Assistant Professor of Plant Pathology*
Ph.D., Michigan (Ann Arbor)
- Baile, Clifton A., *Adjunct Professor of Animal Science, Foods and Nutrition and Physiology and Pharmacology*
Ph.D., Missouri (Columbia)
- Bailey, Joseph Stanley, *Adjunct Senior Research Scientist in Poultry Science*
Ph.D., Georgia
- Bailey, Robert L., *Professor of Forest Resources*
Ph.D., Georgia
- Baker, Francis Todd, *Professor and Department Head of Physics and Astronomy*
Ph.D., Michigan (Ann Arbor)
- Baker, Jean A., *Assistant Professor of Educational Psychology*
Ph.D., Wisconsin (Madison)
- Baker, Jerome F., *Associate Professor of Animal and Dairy Science*
Ph.D., Texas A&M
- Balkwell, James William, *Professor of Sociology*
Ph.D., Michigan State
- Bamber, E. Michael, *Professor of Accounting*
Ph.D., Ohio State
- Bamber, Linda S., *Professor of Accounting*
Ph.D., Ohio State

- Barb, C. Richard, *Adjunct Assistant Professor of Animal and Dairy Science*
Ph.D., Georgia
- Barefield, Russell M., *Professor of Accounting and Director of the School of Accounting*
Ph.D., Ohio State
- Barnhart, Harold M., Jr., *Professor of Food Science & Technology*
Ph.D., Nebraska (Lincoln)
- Barrett, Gary W., *Odum Chair of Ecology*
Ph.D., Georgia
- Barsanti, Jeanne A., *Professor of Small Animal Medicine and Physiology and Pharmacology*
D.V.M., Cornell
- Bartlett, Michael G., *Assistant Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., Georgia Institute of Technology
- Barton, Michelle H., *Associate Professor of Large Animal Medicine and Physiology and Pharmacology*
Ph.D., Georgia
- Basawa, Ishwarasa V., *Professor of Statistics*
Ph.D., Sheffield
- Bateman, Fred, *Nicholas A. Beadles Professor of Economics and Department Head of Economics*
Ph.D., Tulane
- Baughman, George L., *Senior Research Scientist of Textiles, Merchandising & Interiors*
B.S., Florida State
- Baumann, James F., *Professor of Reading Education*
Ph.D., Wisconsin (Madison)
- Baumgartner, Ted A., *Professor of Exercise Science*
Ph.D., Iowa
- Beach, Joseph Warren, *Assistant Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., Florida
- Beach, Steven R., *Professor of Psychology*
Ph.D., State University of New York (Stony Brook)
- Beck, Elwood M., Jr., *Professor and Department Head of Sociology*
Ph.D., Tennessee (Knoxville)
- Beck, Michael Bruce, *Eminent Scholar in Forest Resources and Adjunct Professor of Biological and Agricultural Engineering*
Ph.D., Cambridge
- Becker, Lee B., *Professor of Journalism and Director of the Cox Center*
Ph.D., Wisconsin (Madison)
- Beckmann-Kazez, Sybilla, *Associate Professor of Mathematics*
Ph.D., Pennsylvania
- Bedell, Mary A., *Assistant Professor of Genetics*
Ph.D., Chicago
- Bell-Scott, Patricia, *Professor of Child & Family Development and Adjunct Professor of Psychology*
Ph.D., Tennessee (Knoxville)
- Ben-Yehoshua, Shimshon, *Adjunct Professor of Horticulture*
Ph.D., California (Los Angeles)
- Bender, Michael Thomas, *Assistant Professor of Genetics*
Ph.D., Indiana (Bloomington)
- Bender, William Neil, *Associate Professor of Special Education*
Ph.D., North Carolina (Chapel Hill)
- Benedek, Dezso, *Associate Professor of Comparative Literature*
Ph.D., Pennsylvania State (Allentown)
- Benjamin, Louise M., *Assistant Professor of Telecommunications*
Ph.D., Iowa
- Bennett-Alexander, Dawn D., *Associate Professor of Legal Studies*
J.D., Howard
- Benson, David John, *Professor of Mathematics*
Ph.D., Cambridge
- Benson, Jeri, *Professor of Educational Psychology*
Ph.D., Florida
- Benyshek, Larry Lee, *Professor and Department Head of Animal and Dairy Science*
Ph.D., Virginia Polytechnic Institute
- Berdanier, Carolyn Dawson, *Professor of Foods and Nutrition*
Ph.D., Rutgers (New Brunswick)
- Bergstrom, John Clark, *Professor of Agricultural and Applied Economics*
Ph.D., Texas A&M

- Berisford, Charles Wayne, *Research Professor of Entomology and Adjunct Professor of Forest Resources*
Ph.D., Virginia Polytechnic Institute
- Berlin, Elois Ann, *Associate Professor of Anthropology*
Ph.D., California (Berkeley)
- Berlin, Overton Brent, *Graham Perdue Professor of Anthropology*
Ph.D., Stanford
- Bernstein, Irwin S., *Research Professor of Psychology*
Ph.D., Chicago
- Bertrand, Joseph Keith, *Professor of Animal and Dairy Science*
Ph.D., Iowa State
- Bertsch, Gary K., *University Professor of Political Science*
Ph.D., Oregon
- Bertsch, Paul M., *Professor of Crop and Soil Sciences and Senior Research Scientist in Real Estate*
Ph.D., Kentucky
- Beuchat, Larry Ray, *Research Professor of Food Science and Technology*
Ph.D., Michigan State
- Bhandarkar, Suchendra M., *Associate Professor of Computer Science*
Ph.D., Syracuse
- Billard, Lynne, *University Professor of Statistics*
Ph.D., New South Wales
- Binder, Brian J., *Assistant Professor of Marine Programs*
Ph.D., Woods Hole Oceanographic Institute
- Black, Clanton C., Jr., *Research Professor of Biochemistry and Molecular Biology*
Ph.D., Florida
- Black, Joel Dana, *Associate Professor of Comparative Literature*
Ph.D., Stanford
- Black, Marsha C., *Assistant Professor of Food Science and Technology*
Ph.D., Tennessee (Knoxville)
- Blackstone, John H., Jr., *Professor of Management*
Ph.D., Texas A&M
- Blase, Joseph J., *Professor of Educational Leadership*
Ph.D., Syracuse
- Blase, Reba Jo R., *Professor of Educational Leadership*
Ph.D., Colorado (Boulder)
- Blazer, Vicki Suzette, *Adjunct Associate Professor of Forest Resources*
Ph.D., Rhode Island
- Blount, Ben G., *Professor of Linguistics*
Ph.D., California (Berkeley)
- Blount, Ronald Lynn, *Associate Professor of Psychology*
Ph.D., West Virginia
- Boe, Brian D., *Associate Professor of Mathematics*
Ph.D., Yale
- Boehmer, Robert G., *Associate Professor of Legal Studies*
Ph.D., Oregon
- Boerma, Henry Roger, *Research Professor of Crop and Soil Sciences*
Ph.D., Illinois (Urbana-Champaign)
- Bogue, Ronald Lynn, *Professor of Comparative Literature*
Ph.D., Oregon
- Bongarten, Bruce Charles, *Professor of Forest Resources and Associate Dean of the School of Forest Resources*
Ph.D., Michigan State
- Borders, Bruce Edward, *Associate Professor of Forest Resources*
Ph.D., Georgia
- Boring, Lindsay R., *Adjunct Associate Professor of Forest Resources*
Ph.D., Georgia
- Born, Renate, *Associate Professor of Germanic and Slavic Languages*
Ph.D., Cornell
- Bosch, David D., *Adjunct Research Scientist of Biological and Agricultural Engineering*
Ph.D., Arizona
- Bostrom, Robert Paul, L. *Edmund Rast Professor of Business*
Ph.D., Minnesota (Twin Cities)
- Boudinot, Frank Douglas, *Associate Professor and Department Head of Pharmaceutical and Biomedical Sciences*
Ph.D., State University of New York (Buffalo)
- Bouldin, Richard Hindman, *Professor of Mathematics*
Ph.D., Virginia

- Bounous, Denise I., *Associate Professor of Pathology and Medical Microbiology*
Ph.D., Louisiana State (Baton Rouge)
- Bouton, Joseph Henry, *Professor of Crop and Soil Sciences*
Ph.D., Florida
- Bowen, Joel Philip, *Professor of Chemistry*
Ph.D., Emory
- Box, Elgene Owen, *Professor of Geography*
Ph.D., North Carolina (Chapel Hill)
- Brackett, Benjamin G., *Professor of Physiology and Pharmacology*
Ph.D., Georgia
- Brackett, Robert Ennis, *Professor of Food Science and Technology*
Ph.D., Wisconsin (Madison)
- Braman, Susan K., *Associate Professor of Entomology*
Ph.D., Kentucky
- Branch, Robert C.M., *Associate Professor of Instructional Technology*
Ph.D., Virginia Polytechnical Institute
- Brennenman, Timothy B., *Associate Professor of Plant Pathology*
Ph.D., Virginia Polytechnic Institute
- Brewer, John Michael, *Professor of Biochemistry and Molecular Biology*
Ph.D., Johns Hopkins
- Brewis, Alexandra A., *Department of Anthropology*
Ph.D., Arizona (Tucson)
- Bridges, David C., *Professor of Crop and Soil Sciences*
Ph.D., Texas A&M
- Brisbin, I. Lehr, Jr., *Senior Research Scientist of Ecology and Cellular Biology and Adjunct Associate Professor of Poultry Science and Pharmaceutical and Biomedical Sciences*
Ph.D., Georgia
- Brister, Graham H., *Professor of Forest Resources*
Ph.D., Washington (Seattle)
- Britton, Bruce K., *Professor of Psychology*
Ph.D., Iowa
- Britton, Walter Martin, *Professor of Poultry Science*
Ph.D., North Carolina State
- Broder, Josef M., *Professor of Agricultural and Applied Economics and Assistant Dean of the College of Agricultural and Environmental Sciences*
Ph.D., Michigan State
- Broderson, J. Roger, *Professor of Pathology and Director of Animal Care Unit, Vice President for Research*
Ph.D., Georgia
- Brody, Gene Howard, *Research Professor of Child and Family Development and Adjunct Professor of Psychology*
Ph.D., Arizona
- Bronk, Deborah A., *Assistant Professor Marine Programs*
Ph.D., Maryland (College Park)
- Brook, Diane Lorraine, *Associate Professor of Social Science Education*
Ed.D., Georgia
- Brook, George A., *Professor and Department Head of Geography*
Ph.D., McMaster
- Brooks, Dwight E., *Assistant Professor of Telecommunications*
Ph.D., Iowa
- Brosius, J. Peter, *Assistant Professor of Anthropology*
Ph.D., Michigan (Ann Arbor)
- Brown, Carvin Lee, *Professor of Educational Leadership*
Ed.D., Florida
- Brown, Corrie, *Professor and Department Head of Pathology*
Ph.D., California (Davis)
- Brown, James M., *Associate Professor of Psychology*
Ph.D., State University of New York (Buffalo)
- Brown, Mark R., *Assistant Professor of Entomology*
Ph.D., Georgia
- Brown, Scott A., *Associate Professor of Physiology and Pharmacology and Small Animal Medicine*
Ph.D., Georgia
- Brown, Thomas P., *Associate Professor of Avian Medicine*
Ph.D., Georgia
- Bruckner, James V., *Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., Michigan (Ann Arbor)
- Brudney, Jeffrey L., *Professor of Political Science*
Ph.D., Michigan (Ann Arbor)

- Buchholtz, Ann K., *Assistant Professor of Management*
Ph.D., New York
- Bullock, Charles Spencer, III, *Richard Brevard Russell Professor of Political Science*
Ph.D., Washington University
- Bunce, Opal Rebecca Wheeler, *Associate Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., Georgia
- Bunnell, Bradford Noble, *Professor of Psychology*
Ph.D., Carnegie-Mellon
- Buntin, George David, *Professor of Entomology*
Ph.D., Iowa State
- Burke, William Harold, *Professor of Poultry Science*
Ph.D., California (Davis)
- Burpee, Leon Louis, *Professor of Plant Pathology*
Ph.D., Pennsylvania State
- Burtle, Gary J., *Associate Professor of Animal and Dairy Science*
Ph.D., Auburn
- Burton, Robert Glenn, *Associate Professor of Philosophy*
Ph.D., Northwestern
- Bush, Parshall Ball, *Professor of Poultry Science and Adjunct Professor of Forest Resources*
Ph.D., Kentucky
- Cabrera, Miguel L., *Associate Professor of Crop and Soil Sciences*
Ph.D., Kansas State
- Caillault, Jean-Pierre, *Professor of Physics and Astronomy*
Ph.D., Columbia (New York)
- Calhoun, Karen S., *Professor of Psychology*
Ph.D., Louisiana State (Baton Rouge)
- Cameron, Glen T., *Associate Professor of Advertising/Public Relations*
Ph.D., Texas (Austin)
- Campbell, Linda Frye, *Associate Professor of Counseling and Human Development*
Ph.D., Georgia State
- Canfield, Earl Rodney, Jr., *Professor and Department Head of Computer Science*
Ph.D., California (San Diego)
- Canolty, Nancy L., *Associate Professor of Foods and Nutrition*
Ph.D., California (Berkeley)
- Capie, William R., Jr., *Professor of Science Education*
Ed.D., Houston
- Capomacchia, Anthony Cesare, *Associate Professor of Pharmaceutical and Biomedical Sciences*
Ph.D., Florida
- Carlson, Jon Frederick, *Research Professor of Mathematics*
Ph.D., Virginia
- Carlson, Russell W., *Professor of Biochemistry and Molecular Biology*
Ph.D., Colorado (Boulder)
- Carr, Martha, *Associate Professor of Educational Psychology*
Ph.D. Notre Dame
- Carreira, Lionel Andrade, *Professor of Chemistry*
Ph.D., Massachusetts Institute of Technology
- Carroll, Archie Benjamin, *Robert W. Scherer Professor of Public Affairs and Corporate Communication and Department Head of Management*
D.B.A., Florida State
- Carroll, Carl Ronald, *Professor of Ecology, Director of the Institute of Ecology, and Adjunct Professor of Entomology*
Ph.D., Chicago
- Carrow, Robert N., *Professor of Crop and Soil Sciences*
Ph.D., Michigan State
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Appendix and Index



Appendix

Prefix Abbreviations

Accounting	ACCT	Educational Psychology	EPSY
Adult Education	EADU	Educational Research and Measurement	ERSH
Advertising and Public Relations	ADPR	Elementary Education	EDEL
African American Studies	AFAM	English	ENGL
Agricultural and Applied Economics	AAEC	Entomology	ENTO
Agricultural Education	EAGR	Environmental Design	EDES
Agricultural Extension	AEXT	Environmental Ethics	EETH
Agriculture	AGRI	Environmental Health Science	EHSC
Animal and Dairy Science	ADSC	Exercise Science	EXRS
Animal Nutrition	ANNU	Food Science and Technology	FDST
Anthropology	ANTH	Foods and Nutrition	FDNS
Arabic	ARAB	Forest Resources	FORS
Art	ARTS	Foundations of Education	EFND
Art Education	ARED	French	FREN
Art History	ARHI	Genetics	GENE
Art Interior Design	ARID	Geography	GEOG
Artificial Intelligence	ARTI	Geology	GEOL
Astronomy	ASTR	German	GRMN
Avian Medicine	AVMD	Gerontology	GRNT
Banking and Finance	FINA	Global Policy Studies	GPST
Biochemistry and Molecular Biology	BCMB	Graduate School	GRSC
Biological and Agricultural Engineering	ENGR	Greek	GREK
Biology	BIOL	Health Promotion and Behavior	HPRB
Botany	BTNY	Hebrew	HEBR
Business Education	EBUS	Higher Education	EDHI
Cellular Biology	CBIO	Historic Preservation	HIPR
Chemistry	CHEM	History	HIST
Child and Family Development	CHFD	Home Economics Education	EHEC
Classical Culture	CLAS	Horticulture	HORT
Communication Sciences and Disorders	CMSD	Housing and Consumer Economics	HACE
Comparative Literature	CMLT	Instructional Technology	EDIT
Computer Science	CSCI	Italian	ITAL
Counseling and Human Development Services	ECHD	Japanese	JPNS
Crop and Soil Sciences	CRSS	Journalism	JOUR
Drama	DRAM	Journalism Core	JRLC
Early Childhood Education	EDEC	Journalism and Mass Communication	JRMC
Ecology	ECOL	Landscape Architecture	LAND
Economics	ECON	Language Education	ELAN
Educational Leadership	EDUL	Latin	LATN
		Legal Studies	LEGL
		Linguistics	LING

Management	MGMT	Real Estate	REAL
Management Science and Information Technology	MSIT	Recreation and Leisure Studies	RLST
Marine Sciences	MARS	Religion	RELI
Marketing	MARK	Risk Management and Insurance	RMIN
Marketing Education	EMKT	Romance	ROML
Mathematics	MATH	Russian	RUSS
Mathematics Education	EMAT	Science Education	ESCI
Medical Microbiology	MMIB	Semitic	SEMI
Microbiology	MIBO	Small Animal Medicine	SAMS
Middle School Education	EDMS	Social Science Education	ESOC
Music	MUSI	Social Work	SOWK
Music Education	EMUS	Social Work Education	ESWK
Occupational Studies	EOCS	Sociology	SOCI
Parasitology	PARA	Spanish	SPAN
Pharmacy	PHRM	Special Education	SPED
Philosophy	PHIL	Speech Communication	SPCM
Physical Education and Sport Studies	PEDS	Statistics	STAT
Physics	PHYS	Studio Art	ARST
Physiology and Pharmacology	VPHY	Technological Studies	ETES
Plant Pathology	PATH	Telecommunications	TELE
Political Science	POLS	Textiles, Merchandising and Interiors	TXMI
Portuguese	PORT	Veterinary Anatomy and Radiology	VARB
Poultry Science	POUL	Veterinary Medicine	VETM
Psychology	PSYC	Veterinary Pathology	VPAT
Reading Education	READ	Women's Studies	WMST

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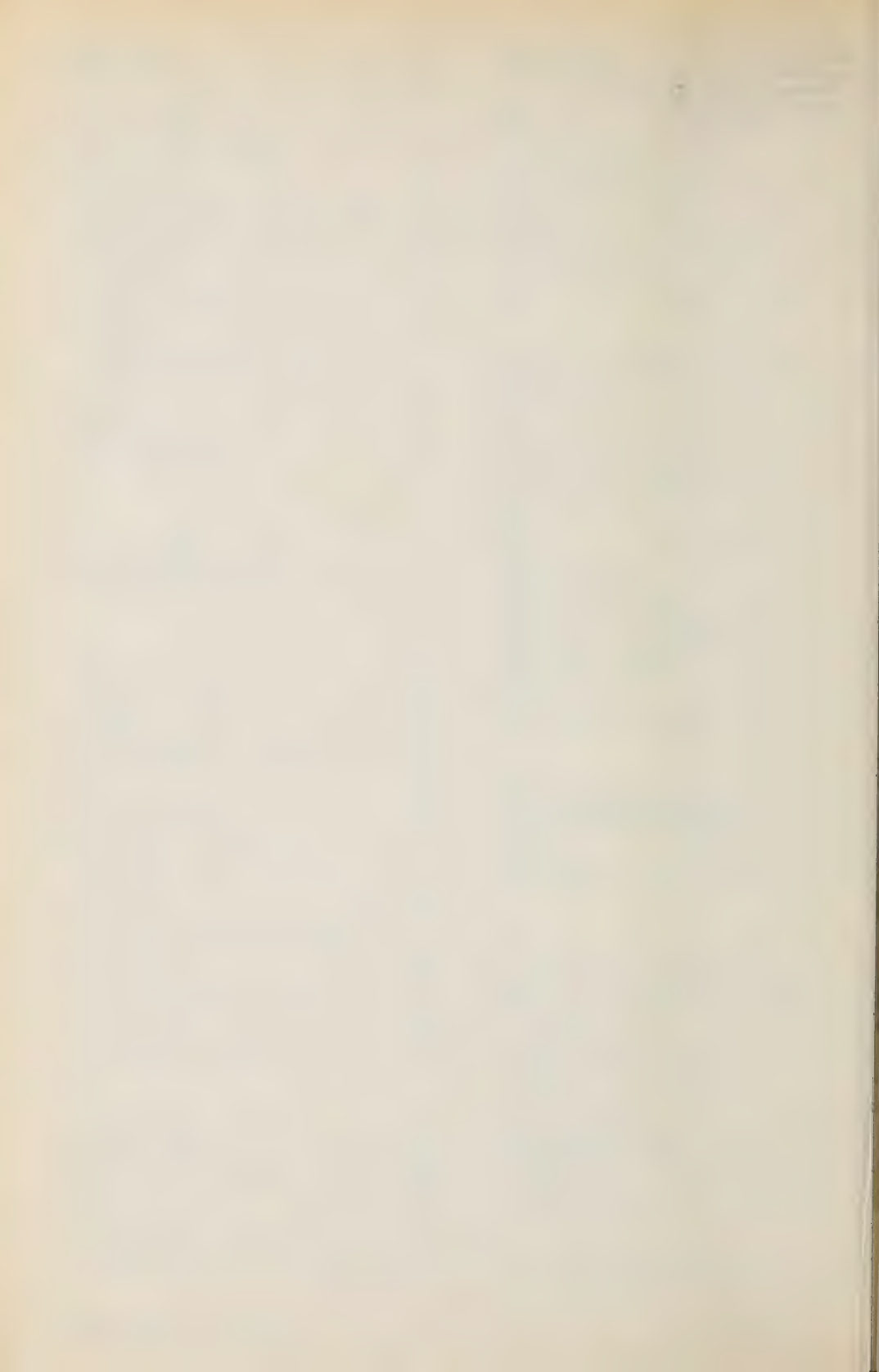
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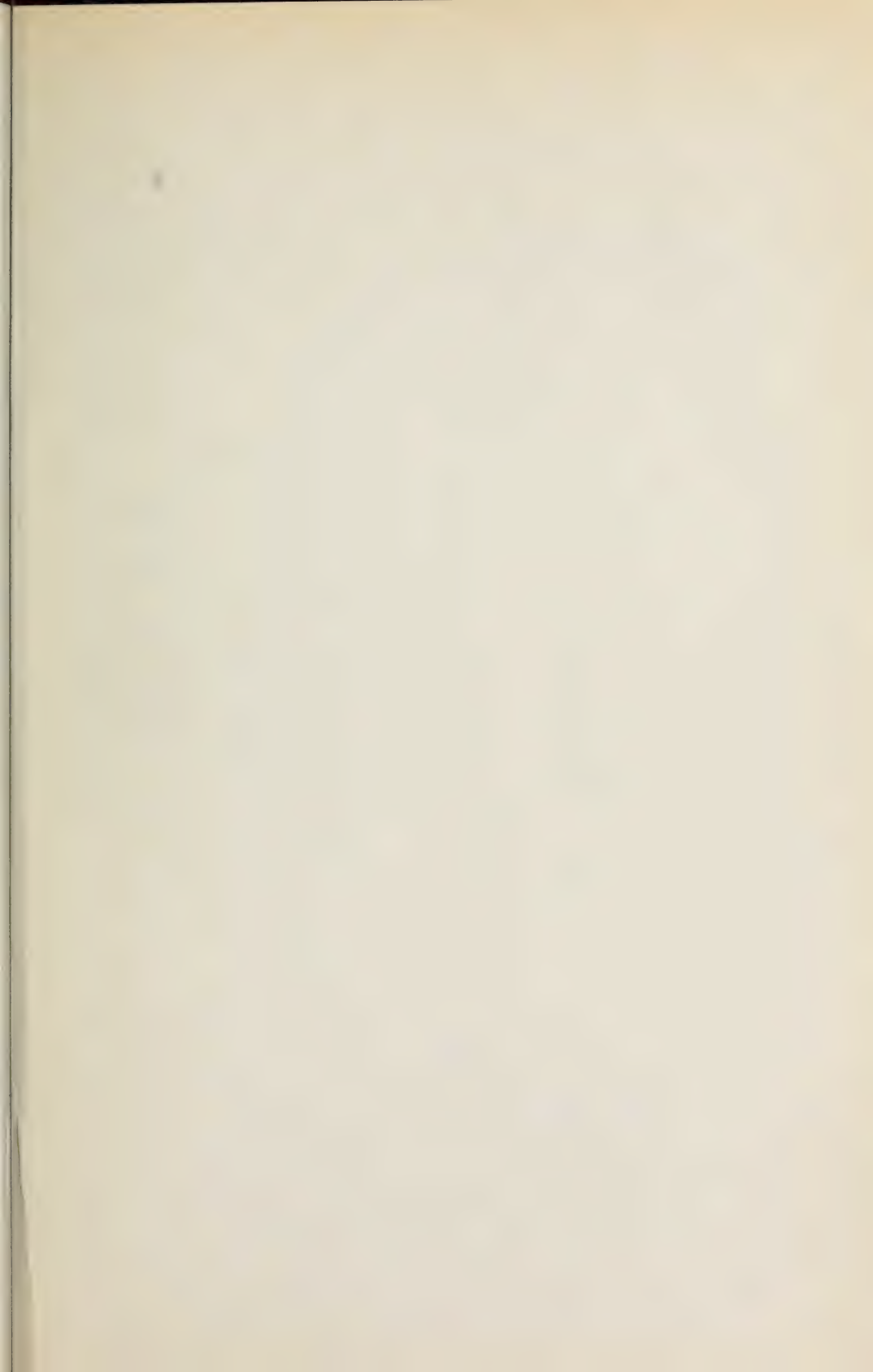
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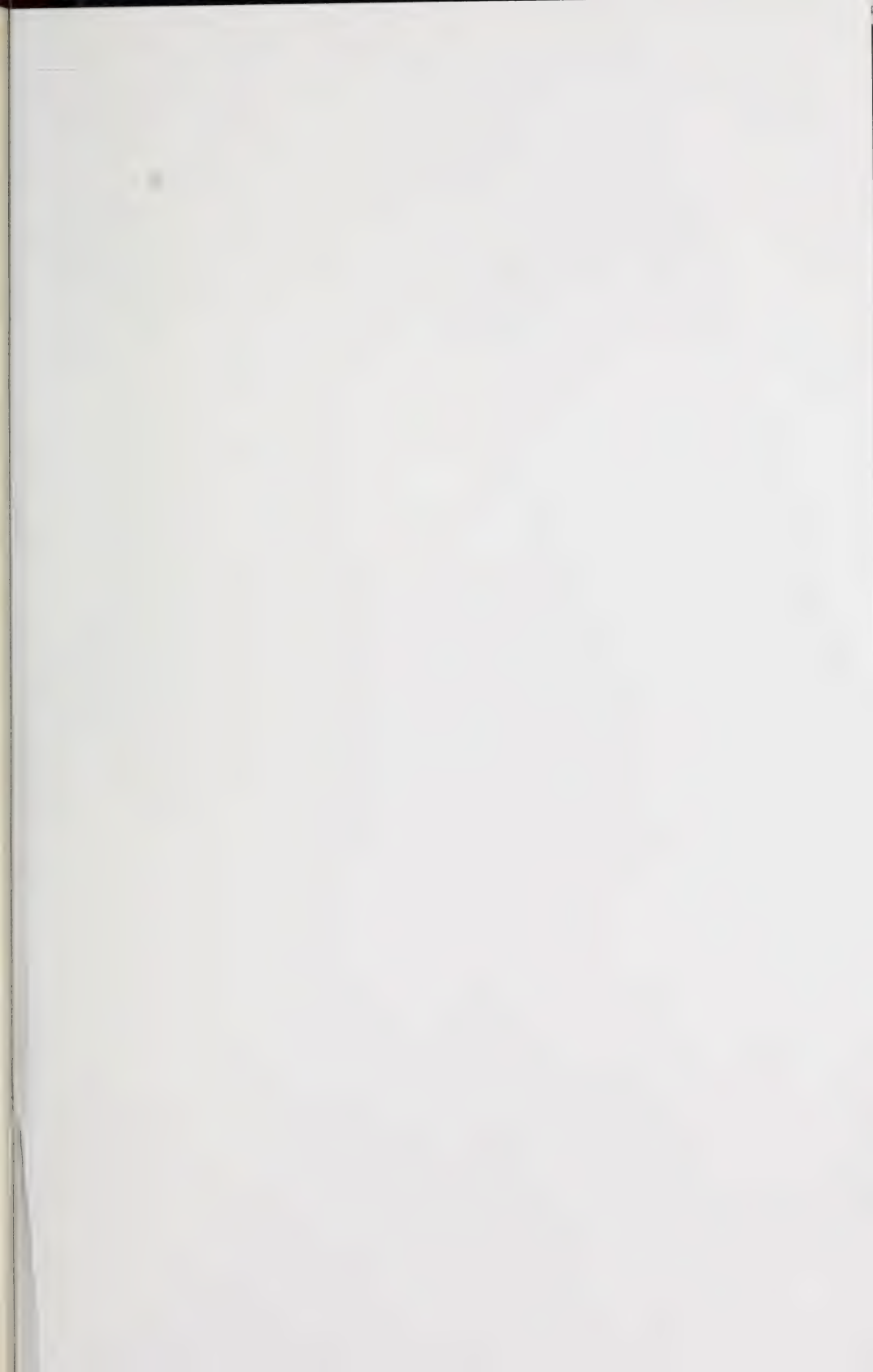
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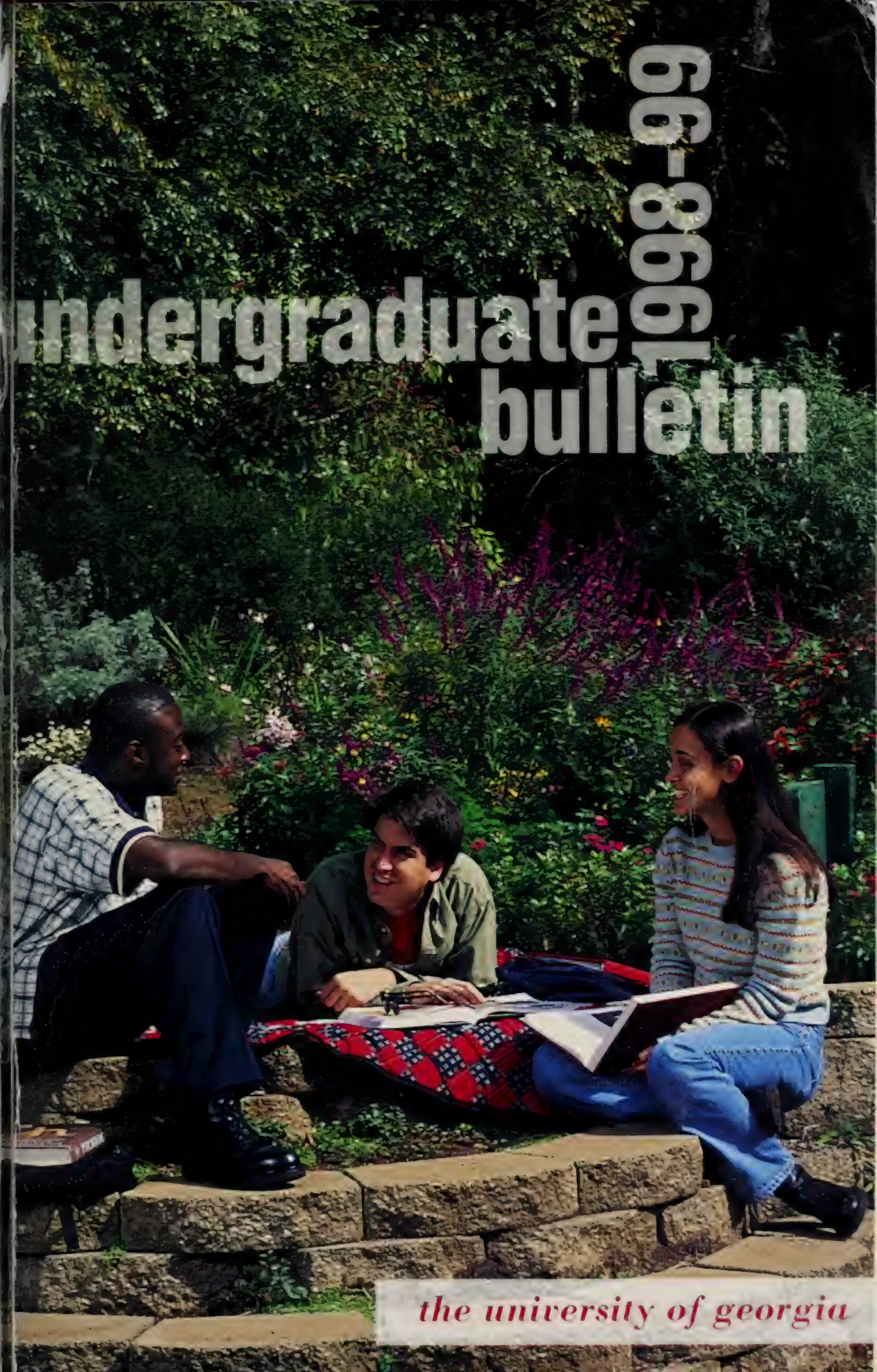




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A photograph of three students sitting on stone steps in a garden. A Black male student on the left is wearing a plaid shirt and dark pants, looking towards the other two. A white male student in the middle is wearing a green jacket and is looking at an open book. A female student on the right is wearing a colorful patterned sweater and blue jeans, also looking at the book. They are surrounded by lush greenery and purple flowers. The text 'undergraduate bulletin' is overlaid in large white letters, and '1998-99' is written vertically in white on the right side.

undergraduate bulletin

1998-99

the university of georgia

Directory

Address:

The University of Georgia
Athens, Georgia 30602
UGA Home Page: <http://www.uga.edu>
UGA Bulletin Home Page: <http://bulletin.uga.edu>

Note: All numbers are in Area Code 706.

UGA Directory Assistance:

542-3000

Admissions, Undergraduate

212 Terrell Hall; 542-2112

Bookstore, University:

Sanford Drive; 542-3171

Career Planning and Placement:

Clark Howell Hall; 542-3375

Counseling and Testing Center:

Clark Howell Hall; 542-3183

Fees Payment:

Business Services Building; 542-1625

Financial Aid:

220 Academic Building; 542-6147

Health Service:

University Health Center; 542-1162

Housing Office:

Russell Hall; 542-1421

International Student Life:

210 Memorial Hall; 542-5867

Libraries:

Main Library, North Campus; 542-7501
Science Library, Graduate Studies Building;
542-4535

Parking Services:

Perimeter Parking Lot, River Road;
542-PARK

Registrar:

105 Academic Building; 542-4040

Student Activities:

Tate Student Center; 542-7774

Student Affairs, Office of the Vice President for:

201 Academic Building; 542-3564

Tate Student Center:

Information, 542-3816

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1998-99 undergraduate bulletin

*the university of georgia
a unit of the university system of georgia*

Volume XCV
January 1998

Pursuant to directives of the President of this institution, the University of Georgia continues its affirmative implementation of equal opportunity to employees, students, covered contractors and vendors, and applicants for employment, admission, or contractor/vendor status. The University of Georgia will act in matters of employment, admissions, programs, and services free of prohibited bias with regard to race, creed, color, sex, national origin, religion, age, veteran status, or disability. Further, the University of Georgia will not maintain racially segregated facilities.

Continuation of the above policies is consistent with applicable provisions of the Civil Rights Act of 1964, the Education Amendments of 1972, Executive Order 11246, Revised Order 4, the Vietnam Era Veterans Readjustment Act of 1974, the Rehabilitation Act of 1973, and The Americans with Disabilities Act of 1990, as revised and/or amended, with implementing regulations. Accordingly, this institution will not discriminate in employment, admissions, programs, or services with regard to any position for which the applicant, employee, or student is qualified and will make reasonable accommodation for physical and mental limitations.

The Affirmative Action Plan implementing the above body of law, regulation, and policy is administered by Claude-Leonard Davis, Director of the UGA Equal Opportunity Office at 3 Peabody Hall, Athens, Georgia 30602-1622. Telephone inquiries concerning this Plan may be directed to (706) 542-7912. Copies of this Plan are available for inspection in the Equal Opportunity Office and in the UGA Main Library during normal weekday working hours.

While every effort is made to provide accurate and current information, the University reserves the right to change, without notice, statements in the bulletin concerning rules, policies, fees, curricula, courses, calendar, or other matters. Students enrolled at the University agree to comply with the University's rules and regulations and to accommodate to any changes necessary. Further, the statements set forth in this bulletin are for informational purposes only and should not be construed as the basis of a contract between a student and the institution.



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Academic Calendar 1998—1999

1998

Winter Quarter

Admission Application Complete	Nov. 1, 1997 (for Winter 98)
Residence Halls Open	Jan. 4, Su
Orientation and Advisement	Jan. 5, M
Late Registration	Jan. 6, Tu
Classes Begin	Jan. 7, W
Drop/Add	Jan. 7-9, W-F
Holiday (M.L.K. Day)	Jan. 19, M
Midpoint of Quarter	Feb. 9, M
Classes End	Mar. 16, M
Final Exams	Mar. 17-20, Tu-F

1998

Spring Quarter

Admission Application Complete	Feb. 1 (for Spring 98)
Residence Halls Open	Mar. 25, W
Orientation and Advisement	Mar. 26, Th
Late Registration	Mar. 27, F
Classes Begin	Mar. 30, M
Drop/Add	Mar. 30-Apr. 1, M-W
Midpoint of Quarter	May 1, F
Classes End	June 5, F
Final Exams	June 8-11, M-Th
Commencement	June 13, Sa

1998

Summer Quarter

First Short Session

Note: Classes meet for **150 minutes daily**.

Admission Application Complete	May 1 (for Summer 98)
Residence Halls Open	June 14, Su
Orientation and Advisement	June 15, M
Late Registration	June 16, Tu
Classes Begin	June 17, W
Drop/Add	June 17-19, W-F
Midpoint of Session	June 29, M
Holiday (No Classes)	July 3, F
Classes End	July 10, F
Final Exams	July 13, M

Second Short Session

Note: Classes meet for **150 minutes daily**.

Late Registration

Classes Begin

Drop/Add

Midpoint of Session

Classes End

Final Exams

July 13, M

July 14, Tu

July 14, Tu

July 24, F

Aug. 5, W

Aug. 6-7, Th-F

Regular (Thru) Session

Note: Classes meet for **75 minutes daily**.

Admission Application Complete

Residence Halls Open

Orientation and Advisement

Late Registration

Classes Begin

Drop/Add

Holiday (No Classes)

Midpoint of Session

Classes End

Final Exams

May 1 (for Summer 98)

June 14, Su

June 15, M

June 16, Tu

June 17, W

June 17-19, W-F

July 3, F

July 10, F

Aug. 4, Tu

Aug. 5-7, W-F



1998	Fall Semester
Admission Application Complete	June 15 (for Fall 98)
Residence Halls Open	Aug. 17, M
Orientation and Advisement	Aug. 18, Tu
Late Registration	Aug. 19, W
Classes Begin	Aug. 24, M
Drop/Add	Aug. 24-27, M-Th
Holiday (Labor Day)	Sept. 7, M
Midpoint of Semester	Oct. 14, W
Holiday (Thanksgiving)	Nov. 25-27, W-F
Classes Resume	Nov. 30, M
Classes End	Dec. 10, Th
Reading Day	Dec. 11, F
Final Exams	Dec. 14-18, M-F

1999	Spring Semester
Admission Application Complete	Nov. 1 (for Spring 99)
Residence Halls Open	Jan. 3, Su
Orientation and Advisement	Jan. 4-5, M-Tu
Late Registration	Jan. 6, W
Classes Begin	Jan. 7, Th
Drop/Add	Jan. 7-8, 11-12, Th-F, M-Tu
Holiday (M.L.K. Day)	Jan. 18, M
Midpoint of Semester	Mar. 3, W
Classes End	Mar. 5, F
Spring Break	Mar. 6-14, Sa-Su
Classes Resume	Mar. 15, M
Classes End	Apr. 29, Th
Reading Day	Apr. 30, F
Final Exams	May 3-7, M-F
Commencement	May 8, Sa

This Calendar is correct as of the date of this publication, but may be subject to change during the next year. Please refer to the *Schedule of Classes* and/or other special announcements that may be forthcoming.

The University System of Georgia

The University System of Georgia includes 34 state-sponsored public institutions located throughout Georgia—19 universities and 15 two-year colleges.

A 16-member constitutional Board of Regents—one from each of the state's 11 Congressional Districts and five from the state-at-large—governs the University System which was established in 1931. Board members are appointed by the Governor, subject to state senate confirmation, for seven-year terms. The Chairperson, the Vice Chairperson, and other officers of the Board are elected by its membership. The Chancellor, who is not a Board member, is the chief executive officer of the Board and chief administrative officer of the University System.

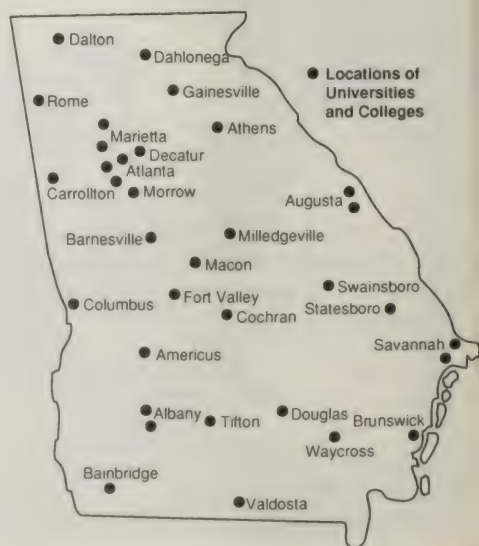
The overall programs and services of the University System are offered through three major components: Instruction; Public Service/Continuing Education; Research.

Board of Regents' policies for government, management and control of the University System and the Chancellor's administrative actions provide institutions a high degree of autonomy. The President is the executive head of each institution and is recommended by the Chancellor and appointed by the Board.

The University System Advisory Council, with 34 committees, engenders continual dialogue on major academic and administrative matters and makes recommendations to the Chancellor, who transmits them to the Board as appropriate, regarding academic and administrative operations in the System. The Council consists of the Chancellor, the Vice Chancellor, and all Presidents as voting members. It includes other officials of institutions as nonvoting members. The

Council's 21 academic and 13 administrative committees are composed of institutional representatives, typically one from each unit, and deal with matters of System-wide application.

Matriculation fees and nonresident tuition fees for students at all institutions are established by the Board of Regents. All students pay matriculation fees while out-of-state students pay nonresident tuition in addition. Other fees for student services and activities are established by institutions, subject to Board of Regents' approval. Non-mandatory fees established by institutions are subject to approval of the Board of Regents office.



Institutions of the University System of Georgia

Comprehensive and Special Purpose Universities

Athens
The University of Georgia
Atlanta
Georgia Institute of Technology
Georgia State University
Augusta
Medical College of Georgia

State and Regional Universities

Albany
Albany State University
Americus
Georgia Southwestern State University
Augusta
Augusta State University
Carrollton
State University of West Georgia
Columbus
Columbus State University
Dahlonega
North Georgia College and State University
Fort Valley
Fort Valley State University
Marietta
Kennesaw State University
Southern Polytechnic State University
Milledgeville
Georgia College and State University
Morrow
Clayton College and State University
Savannah
Armstrong Atlantic State University
Savannah State University
Statesboro
Georgia Southern University
Valdosta
Valdosta State University

Two-year Colleges

Albany
Darton College
Atlanta
Atlanta Metropolitan College
Bainbridge
Bainbridge College
Barnesville
Gordon College
Brunswick
Coastal Georgia Community College
Cochran
Middle Georgia College
Dalton
Dalton College
Decatur
Georgia Perimeter College
Douglas
South Georgia College
Gainesville
Gainesville College
Macon
Macon State College
Rome
Floyd College
Swainsboro
East Georgia College
Tifton
Abraham Baldwin Agri. College
Waycross
Waycross College

University System of Georgia
244 Washington Street, S.W.
Atlanta, Georgia 30334

The University System of Georgia

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The University of Georgia

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Libraries

William G. Potter, *Director*



Colleges and Schools

Franklin College of Arts and Sciences (1801)

Wyatt W. Anderson, *Dean*

College of Agricultural and Environmental Sciences (1859)

Gale A. Buchanan, *Dean*

School of Law (1859)

Edward D. Spurgeon, *Dean*

College of Pharmacy (1903)

Stuart Feldman, *Dean*

Daniel B. Warnell School of Forest Resources (1906)

Arnett C. Mace, Jr., *Dean*

College of Education (1908)

Russell H. Yeany, *Dean*

Graduate School (1910)

Gordhan Patel, *Dean*

C. Herman and Mary Virginia Terry College of Business (1912)

J.M. Tull School of Accounting

J. Don Edwards, *Interim Dean*

Henry W. Grady College of Journalism and Mass Communication (1915)

J. Thomas Russell, *Dean*

College of Family and Consumer Sciences (1933)

Sharon Y. Nickols, *Dean*

College of Veterinary Medicine (1946)

Keith W. Prasse, *Dean*

School of Social Work (1964)

Bonnie L. Yegidis, *Dean*

School of Environmental Design (1969)

John F. Crowley, *Dean*



University Profile

History

When the University of Georgia was incorporated by an act of the General Assembly on January 27, 1785, Georgia became the first state to charter a state-supported university. In 1784 the General Assembly had set aside 40,000 acres of land to endow a college or seminary of learning.

At the first meeting of the board of trustees, held in Augusta on February 13, 1786, Abraham Baldwin was selected president of the University. Baldwin, a native of Connecticut and a graduate of Yale University who had come to Georgia in 1784, drafted the charter adopted by the General Assembly.

The University was actually established in 1801 when a committee of the board of trustees selected a land site. John Milledge, later a governor of the state, purchased and gave to the board of trustees the chosen tract of 633 acres on the banks of the Oconee River in northeast Georgia.

Josiah Meigs was named president of the University and work was begun on the first building, originally called Franklin College in honor of Benjamin Franklin and now known as Old College. The University graduated its first class in 1804.

The curriculum of traditional classical studies was broadened in 1843 to include courses in law, and again in 1872 when the University received federal funds for instruction in agriculture and mechanical arts.

Thirteen schools and colleges, with auxiliary divisions, carry on the University's programs of teaching, research and service. These colleges and schools and the dates of their establishment as separate administrative units are: Franklin College of Arts and

Sciences, 1801; College of Agricultural and Environmental Sciences, 1859; School of Law, 1859; College of Pharmacy, 1903; D. B. Warnell School of Forest Resources, 1906; College of Education, 1908; Graduate School, 1910; C. Herman and Mary Virginia Terry College of Business, 1912; Henry W. Grady College of Journalism and Mass Communication, 1915; College of Family and Consumer Sciences, 1933; College of Veterinary Medicine, 1946; School of Social Work, 1964; School of Environmental Design, 1969. The Division of General Extension, now the Georgia Center for Continuing Education, was incorporated into the University in 1947.

In 1931 the General Assembly of Georgia placed all state-supported institutions of higher education, including the University of Georgia, under the jurisdiction of a single board. This organization, known as the University System of Georgia, is governed by the Board of Regents. The Board of Regents' executive officer, the chancellor, exercises a general supervisory control over all institutions of the University System, with each institution having its own executive officers and faculty.

Mission

The University of Georgia, a land-grant and sea-grant university with state-wide commitments and responsibilities, is the state's oldest, most comprehensive, and most diversified institution of higher education. Its motto, "to teach, to serve, and to inquire into the nature of things," reflects the University's integral and unique role in the conservation and enhancement of the state's and nation's intellectual, cultural, and environmental heritage.



The University of Georgia shares with the other research universities of the University System of Georgia the following core characteristics:

1. a statewide responsibility and commitment to excellence and academic achievements having national and international recognition;
2. a commitment to excellence in a teaching/learning environment dedicated to serve a diverse and well-prepared student body, to promote high levels of student achievement, and to provide appropriate academic support services;
3. a commitment to excellence in research, scholarship, and creative endeavors that are focused on organized programs to create, maintain, and apply new knowledge and theories; that promote instructional quality and effectiveness; and that enhance institutionally relevant faculty qualifications;
4. a commitment to excellence in public service, economic development, and technical assistance activities designed to address the strategic needs of the State of Georgia along with a comprehensive offering of continuing education designed to meet the needs of Georgia's citizens in life-long learning and professional education;
5. a wide range of academic and professional programming at the baccalaureate, master's, and doctoral levels.

With its statewide mission and core characteristics, the University of Georgia endeavors to prepare the University community and the state for full participation in the global society of the twenty-first century. Through its programs and practices, it seeks to foster the understanding of and respect for cultural differences necessary for an enlightened and educated citizenry. It further provides for cultural, ethnic, gender, and racial diversity in the faculty, staff, and student body. The University is committed to preparing the University community to appreciate the critical importance of a quality environment to an interdependent global society.

As a comprehensive land-grant and sea-grant institution, the University of Georgia offers baccalaureate, master's, doctoral and professional degrees in the arts, humanities, social sciences, biological sciences, physical sciences, agricultural and environmental sciences, business, environmental design, family and consumer sciences, forest resources, journalism and mass communication, education, law, pharmacy, social work, and veterinary medicine.

The University attracts students nationally and internationally as well as from within Georgia. It offers the state's broadest array of possibilities in graduate and professional education, and thus a large minority of the student body is post-baccalaureate. The predominantly Georgian undergraduate student body is a mix of highly qualified students originally admitted as freshmen and selected transfer students principally from other University System institutions.

With original scholarship, basic and applied research, and creative activities constituting an essential core from which to draw, the impact of the land-grant and sea-grant mission is reflected throughout the state. Cooperative extension, continuing education, public service, experiment stations, and technology transfer are all designed to enhance the well-being of the citizens of Georgia through their roles in economic, social, and community development.

As it has been historically, the University of Georgia is responsive to the evolution of

the state's educational, social, and economic needs. It aspires through its strategic planning to even closer contact and interaction with public and private institutions throughout the state as well as with the citizens it serves.

Accreditation

The University of Georgia is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award Associate, Bachelor's, Master's, and Doctor's degrees. In addition, a number of the University's 13 colleges and schools are further accredited by appropriate educational associations.

Graduation Rate

Pursuant to Public Law 101-542, the Student Right to Know and Campus Security Act, the six year graduation rate for all students who enrolled at the University as first-time, full-time, baccalaureate degree-seeking students in the freshmen class of 1990 was 60 percent. The rate for male students was 58 percent; the rate for female students was 62 percent.

The Campus

The University sweeps across Athens' famed hills, covering approximately 4,300 acres within Clarke County.

Traditional North Campus is the home of the colleges of Arts and Sciences, Business Administration, and Journalism and Mass Communication, and the schools of Environmental Design and Law, as well as the Main Library. Noteworthy buildings on North Campus are Old College (1801), New College (1823), Demosthenian Hall (1824), the University Chapel (1832), and Phi Kappa Hall (1834). The Ladies' Garden Club Founders Memorial Garden enhances the area near Denmark Hall. South Campus, with an array of modern structures, has grown southward as the University continues to expand. Buildings include the Boyd Gradu-



ate Studies Research Center, colleges of Agricultural and Environmental Sciences, Family and Consumer Sciences, Veterinary Medicine, Education, and Pharmacy, and the schools of Forest Resources and Social Work, as well as the Georgia Center for Continuing Education, Stegeman Coliseum and Butts-Mehre Heritage Hall.

State funds complemented by liberal private gifts, grants from foundations, and federal grants continue to increase the building program on campus. Buildings recently completed include the Life Sciences Building, which provides state-of-the-art facilities and equipment for biotechnology research and teaching; the Ramsey Student Center for Physical Activities, which provides a comprehensive fitness/exercise facility for students and faculty; and the Performing and Visual Arts Complex, which provides a home for the University's schools of art and music as well as the Georgia Museum of Art.

Athens

Georgia's "Classic City," Athens is a prospering community, one that reflects the charm of the Old South while developing in cultural and industrial areas.

A college town in every sense of the word, Athens appreciates its University

population while recognizing its obligation to all residents to grow independently of the University.

The Clarke County population, according to a 1990 census estimate, is approximately 86,000. Athens' elevation is 600 to 800 feet above mean sea level, and because of its geographic location, the city is sheltered from much of the extreme weather of the winter season. Mean temperature for January, the coldest month, is 43°F., and for July, the warmest month, 79°F. Average minimum and maximum temperatures for January are 33° and 53°F., and for July, 68° and 89°F. Average rainfall is 50.42 inches.

Athens is served by two daily newspapers and an independent student newspaper, *The Red and Black*. Athens also has a weekly newspaper and the Atlanta newspapers, as well as eight local radio stations and the University's radio stations, WUOG-FM and WUGA-FM.

Network television is available through direct reception or cable within a 100-mile radius of Athens.

Two hospitals offering comprehensive health care serve Athens, and there are more than 80 churches in the area.



General Requirements

Each applicant's record should reflect promise of growth, seriousness of purpose, and a sense of responsibility. The University seeks to enroll students with superior academic credentials and strong personal character who will positively contribute to the diverse and rich cultural environment of campus life.

The University reserves the right to admit only those applicants whose records indicate potential for success in a university environment. The University also reserves the right to examine further any applicant by the use of psychological, achievement, and/or aptitude tests, and personal interview.

The University of Georgia complies with the Civil Rights Act of 1964 and is an Affirmative Action/Equal Employment Opportunity institution. Additionally, the University is actively involved in affirmative action recruitment.

Admission Procedures and Standards

The University, through the Office of Undergraduate Admissions, reserves the right to revise admissions criteria to any program, school, or college and/or to request additional information of applicants at any time during the academic year if deemed necessary.

HOW TO APPLY FOR ADMISSION

Applications for undergraduate admission may be obtained electronically from our Web site at <http://www.admissions.uga.edu> or from the UGA Office of Undergraduate

Admissions, 212 Terrell Hall, University of Georgia, Athens, Georgia 30602-1633. Completion of all forms and submission of all requirements by the appropriate deadlines are mandatory before the applicant's request for admission can be considered. Applicants to the University must enclose a non-refundable application fee to cover the expense of processing the application. See the financial section of this bulletin for a complete explanation of fees.

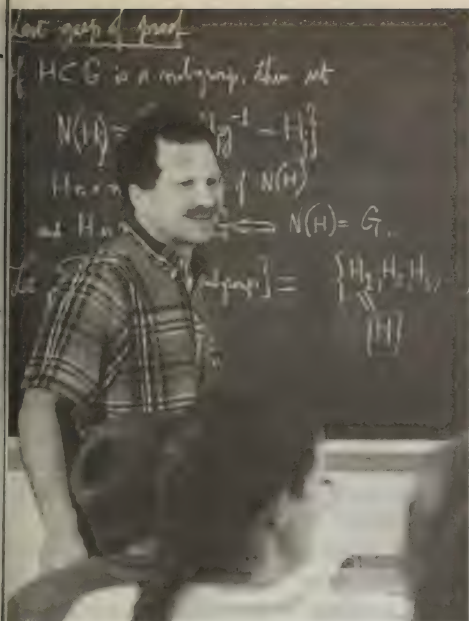
Once the application for admission, appropriate test scores, and other required records of the applicant are found to be complete and in proper order, an evaluation will be made in terms of academic record, the probability of completing the requirements for the desired degree, and the competitiveness within the applicant pool. The University reserves the right to terminate acceptance of application forms when enrollment limits are reached or when credentials are deemed incomplete or unsatisfactory.

Acceptance of each applicant will be determined by the Faculty Admissions Committee subject to the right of appeal as provided in the University System.

Specific information concerning housing, orientation, pre-registration and transferred courses is sent to the student following the official acceptance.

Freshman Admission

Applicants for freshman admission to summer or fall semester must apply by February 1. The University of Georgia admits freshman applicants whose high school curriculum, grades earned, and college admissions test scores indicate they



can do successful work at the university level. The admissions standards are based primarily on a combination of these academic factors and also reflect the competition for a limited number of class openings by a growing number of highly qualified applicants. For freshman admissions, the University calculates an admissions index based upon academic credentials and the actual performance of recently enrolled freshman classes. Historically, the most heavily weighted factor in the University's admissions process has been the grade average earned in college preparatory subjects. The University may request and use in the admission process qualitative information to better determine a student's potential for success at and contribution to the University.

REQUIRED HIGH SCHOOL CURRICULUM

Prospective freshman applicants are encouraged to take a full schedule of college preparatory subjects in high school. Only grades earned in English, mathematics, science, social studies, and foreign language are used to calculate the academic high school grade point average for use in the admissions process.

It is recommended that high school students take the most rigorous curriculum in order to be prepared for college course work. Certain high school courses are recommended for particular college majors. For instance, trigonometry, geometry, chemistry, and physics are advised for pursuing any Bachelor of Science degree.

The following course of study is currently required as a minimum by the University System of Georgia for students graduating from high school who plan to enroll in a University System research university in a program leading to the baccalaureate degree. This requirement will become more rigorous for freshmen who enroll in the year 2001 and later.

College Preparatory Curriculum (CPC)

Courses and Instructional Emphasis:

English (4 units)

- Grammar and usage
- Literature (American & World)
- Advanced composition skills

Mathematics (3 units)

- Algebra I, II, and Geometry

Science (3 units)

- Physical Science and
- At least two laboratory courses from Biology, Chemistry, Physics or related areas of science or three laboratory courses from Biology, Chemistry, or Physics

Social Science (3 units)

- American Studies
- World Studies
- A third social science, preferably Economics and Government

Foreign Language (2 units)

- Two courses in one language emphasizing speaking, listening, reading, and writing

TEST REQUIREMENTS

An official report on the College Board's Scholastic Assessment Test (SAT-I) or the American College Test (ACT) is required of all freshman applicants. It is highly recommended that applicants also submit two or three SAT-II test scores (English,

Math, and a foreign language). The University's school code number for the SAT is 5813; our code for the ACT is 0872. In order to expedite the processing of your application, please remember to include your correct Social Security Number and birth date when taking the SAT or ACT. Applicants whose high school class has been graduated five or more years may be considered for admission without SAT or ACT scores. These non-traditional applicants may be asked to submit results of the Collegiate Placement Exam which may be taken at the University's Counseling and Testing Center.

Students who have had at least two years of foreign language in high school should take the College Board SAT-II Subject Exam in that language if they plan to continue studying that language. Optional but strongly recommended College Board SAT-II or Advanced Placement tests which may be taken for advanced credit include English, chemistry, biology, physics, American or European history, mathematics, art, computer science, political science, economics, music, and psychology. Further information on the University's advanced placement policies may be obtained from the Honors Program office.

Under University System of Georgia Board of Regents Policy, freshman applicants from non-accredited high schools must submit satisfactory scores on eight required College Board SAT-II exams to be considered for admission.

Information for making application to take the College Board SAT-II or Advanced Placement tests may be obtained from the high school counselor, or directly from Educational Testing Service, P.O. Box 592, Princeton, New Jersey 08540.

Transfer Admission

To be considered for University admission, all transfer applicants must be in good academic standing at their last college attended and must have official transcripts of all college work sent to the University. The deadline for receipt of transfer applica-

tions and all required documents for fall semester is June 15, spring is November 1, and summer is April 1. Transfer applications are generally processed during the term immediately preceding the intended term of transfer to UGA. Students who have earned either 30 semester or 45 quarter hours of transferable credit by the application/file completion deadline for their University of Georgia enrollment term will not be required to meet freshman admission requirements. The transfer grade point average will be calculated by UGA Admissions on grades earned in all academic college work attempted. A student who is on academic warning, probation, or dismissal from the last institution attended will not be admitted to the University.

The transfer grade point average required for admission to UGA is established each year by the Faculty Admissions Committee. Transfer applicants of sophomore standing with overall cumulative academic averages higher than 2.3 will be considered for University admission. However, University colleges, schools, and individual majors may require higher averages for acceptance. Admission to the University does not imply that the student is eligible for admission to a specific major. Precise admission requirements can be obtained from the Office of Undergraduate Admissions.

If a student planning to transfer to UGA from another institution within the University System of Georgia has completed an area of the new semester core curriculum with courses taken either at that institution or another institution from which UGA accepts transfer credit, UGA will accept the area as satisfied. An application for transfer admission to the University from another University System institution will be incomplete without a certificate or letter from the sending University System institution regarding completion of the new semester core areas (Areas A through F). This is required for UGA certification of all requirements of its authorized degrees. Prior to completing an appropriate lower-division Area F of the semester core, no transfer student can technically be considered a candidate for admission to a major.

To calculate an overall transfer grade average, UGA Admissions must include all grades earned, including Ds and Fs, in all academic courses an applicant has attempted. Normally, grades earned in courses repeated after earning a C grade or better in that course will be excluded from the transfer admissions average. The calculated transfer admissions average will not include grades earned in physical education, orientation courses, or career-oriented courses from a terminal associate degree program.

Transient students may enroll for a summer semester in some undergraduate classes by applying for admission and presenting a letter of good standing from their home college. Transients for any other term must meet all regular transfer admission requirements. Transient admission is only for one semester. **Note:** Courses taken at the University while a student is a transient are not used in determining later University admission as a regular transfer student.

Post-baccalaureate students are college graduates taking additional undergraduate courses but not for a UGA undergraduate degree. To be admitted, post-baccalaureate students must submit official transcripts from each college attended showing proof of graduation and the required overall transfer academic grade point average for the UGA major to which they desire admission.

Second degree students are college graduates planning to obtain an additional undergraduate degree from UGA. To be admitted, official transcripts must be submitted from all colleges attended and students must meet the minimum grade point average required for the intended major.

Any transfer credit received that brings the overall grade point average below the specific requirements for admission may result in withdrawal of the admission offer before or after matriculation at the University.

TRANSFER OF COLLEGE CREDIT

The University of Georgia accepts credits from other accredited colleges and universities if the courses taken are "college parallel" and not remedial or career (terminal) courses. In order to earn a four-year degree from the

University, a student must complete 40 of the last 60 semester hours on the University of Georgia campus. Twelve hours of this work must be in senior division courses of the student's major.

A maximum of 100 academic semester hours may be applied from other institutions toward a second baccalaureate degree. In order to earn a first baccalaureate degree from the University, a minimum of 40 semester hours in residence at the University of Georgia is required.

Students transferring to the University who have completed some or all of the core curriculum courses at another unit of the University System will receive full transfer credit. However, courses from a two-year college that would be earned in the upper division at the University are generally non-transferable. A grade of C or higher in freshman English composition courses is required to guarantee transferability (see English 1101 and 1102, page 35). Students transferring from quarter calendar institutions may multiply the number of quarter hours by two-thirds to determine generally the number of semester hours that will be transferred. The University of Georgia converts from quarters to semesters in fall 1998. All transfer credit earned through summer 1998 will be recorded as quarter hours. All transfer credit earned fall 1998 and later will be recorded as semester hours.

College credit will not be allowed for remedial courses or for courses applicable only to the terminal (career) associate degree level.

Choice of School or College

Students of freshman and sophomore status undecided about a major should carefully review this Bulletin to determine which school or college more nearly meets their interests. The Colleges of Agricultural and Environmental Sciences, Arts and Sciences, and Education allow a student entrance as an Unspecified major. The required appointments with one's academic advisor and other University services can be of assistance in this decision.

Transfer students of junior or senior status are not eligible to declare an Unspecified major. Students transferring over 60 semester or 90 quarter hours of credit must declare a major for which they are eligible and be prepared to begin course work in that major upon matriculation.

Applicants for Readmission

Undergraduate students who are out of the University for at least one calendar year must file an application for readmission and non-refundable application fee at least 20 calendar days (30 days for graduate students) prior to the published date of registration. Students who are on academic dismissal from the University should also contact their University of Georgia academic college of last enrollment. Undergraduate readmission applications are available electronically from our Web site at <http://www.admissions.uga.edu> or from the Office of Undergraduate Admissions. Undergraduate students who have not been enrolled at the University for a period of five years or more may be subject to different University, college or school, or department requirements than those which existed at the time of matriculation at the University or entry into a given college/school, major, minor, or certificate program.

Graduate and Professional Students

Students in the professional programs of journalism, law, pharmacy, and veterinary medicine must meet additional admission requirements found in the appropriate sections of the Bulletin.

Students applying to graduate programs should consult the *Graduate School Bulletin* or the dean of the particular school or college for a list of requirements.

The University reserves the right to deny admission to applicants whose records indicate inadequate preparation to do

college work even though they may meet the minimum entrance requirements.

Recipients of the GED

Persons over 18 years of age whose secondary schooling was interrupted may be admitted by presenting a State Department of Education Certificate of High School Equivalency (GED) and by passing entrance examinations as determined by the Admissions Committee. In general, the Faculty Admissions Committee asks that such applicants take the College Board Scholastic Assessment Test (SAT-I) or the American College Test (ACT), unless the applicant's class has been graduated more than five years.

Students will be considered for admission on the basis of the GED scores only after their class has been graduated one full year from secondary school.

Admission of High School Juniors

Under exceptional circumstances, students may be admitted to the University at the end of their junior year in high school. These students must have outstanding records in college preparatory subjects and must present scores on the combined verbal and mathematics sections of the Scholastic Assessment Test or the American College Test satisfactory to the University Faculty Admissions Committee. The recommendation of the student's high school principal or counselor will also be considered by the Admissions Committee.

Admission and Registration of Persons 62 Years of Age or Older

Pursuant to the provisions of an amendment to the Georgia Constitution, the Board of Regents established the following rules with respect to enrollment of persons of age 62 or

older in units of the University System. To be eligible for enrollment under the provisions of this amendment such persons:

- 1) Must be residents of Georgia, 62 years of age or older at the time of registration, and must present a birth certificate or other comparable written documentation of age to enable the Registrar to determine eligibility.
- 2) May enroll as regular students in courses offered for resident credit on a "space available" basis without payment of fees, except for supplies or laboratory or shop fees.
- 3) Must meet all System and institutional admission requirements.
- 4) Will have all usual student and institutional records maintained.
- 5) Must meet all System, institutional, and legislated degree requirements such as the Regents' Exam, Major Area Exam, and History and Constitution instruction or exams, if they are degree-seeking students.
- 6) May not enroll in Dental, Medical, Veterinary, or Law Schools under the provisions of this policy.

Orientation

New undergraduate students are required to register for and attend an orientation session prior to enrolling at the University. Orientation provides opportunities for required placement testing, academic advising, and registration for classes, as well as general information pertinent to newly entering students. Orientation information is mailed in late spring to students who have been accepted for the following fall semester and by December 1 and April 1 for the spring and summer semesters.

Registration and Late Registration Penalties

Registration dates are listed in the front of this Bulletin. A student who fails to register on the scheduled days will be subject to



penalties of \$25.00 as listed in the financial information section. No student will be admitted after the expiration of the third day beyond scheduled dates except by special permission. No course may be added to a student's schedule after the first fourteen calendar days of a term, with the exception of a research, dissertation, or thesis course at the graduate level.

Medical History

New students and former students who have been absent from the University for over one year must have a complete medical history form on file with the University Health Service prior to registration. Information regarding medical history to be collected will be sent with notification of acceptance for admission and should be returned to the Medical Records Department, University Health Service.

Financial Information

Cost of Education

The University of Georgia will convert from the quarter system to the semester system beginning fall 1998. Matriculation fees for the semester system will be determined in April 1998, after the printing of this Bulletin. For semester fee information, contact the Banking and Trust Department, (706) 542-1625, or visit the University of Georgia Bulletin web site at <http://bulletin.uga.edu>. The web site will be updated with semester information as it becomes available.

The current (1997-98) estimated cost of education for a Georgia resident is \$9,501 per academic year. This estimate includes tuition and fees, books and supplies, room and board, and personal expenses. An additional out-of-state fee assessed all non-Georgia residents increases this estimate to \$15,435.

Students of forest resources, law, pharmacy, and veterinary medicine will find the cost somewhat more because of higher fees required.

The University reserves the right to change its fees, charges, rules, and regulations at the beginning of any term and without previous notice. This right will be exercised cautiously.

Fees

APPLICATION FEES

Application Fee \$25.00

Required of all students applying for admission or readmission, and covers expenses of processing applications only. Make check or money order payable to the

University of Georgia. DO NOT SEND CASH.

Fee Deposit—Law School \$50.00

Required of a new student accepted by the Law School to reserve his or her place in the class. Must be paid by April 1 of the year in which admission is sought, or within 30 days of acceptance, whichever comes later. Deposit is non-refundable, but is applicable toward payment of the first term matriculation fees.

Fee Deposit—College of Veterinary Medicine \$100.00

Required from each applicant accepted for admission to the College of Veterinary Medicine. Must be received by May 1 or within three weeks after the date of issuance of the acceptance. If deposit is not received within the specified time, an alternate candidate will be called to fill the place of the accepted applicant. Deposit is non-refundable, but is applicable toward payment of the first term matriculation fees.

AUDITOR'S FEE

Persons desiring to attend courses or lectures without examination or credit may register to audit a course. Fees for auditors are the same as those for students registered for credit.

BREAKAGE DEPOSIT AND COURSE FEES

There are no general laboratory fees, but special fees, including breakage fees, are required for a few courses and some field trips. Students are held responsible for any breakage they cause.

SPECIAL FEES AND CHARGES

Service Charge for Late Registration	\$25.00
Service Charge for Late Payment of Housing Fee	\$25.00

Special Examination Fee

The University reserves the right to charge a fee for any special examination given at the request of a student.

Transcript Fee

Each copy	\$2.00
Special handling fee for same-day service	\$4.00
FAX service	\$6.00

Replacement Fee

Diploma	\$10.00
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Special Programs Fees

Agencies sponsoring regularly enrolled students who receive special academic programming or administrative services are expected to pay fees in addition to those normally charged for the usual services. While rates charged will be determined by contract arrangements, the scheduled fees for such services will be \$125 per semester.

Payment

METHOD OF PAYMENT

On-line Payment Authorization of Fees Via OASIS

The following payment options are available via the OASIS Registration System to satisfy fees:

- Sponsorships
- Loans, Grants, or Scholarships
- Payroll Deduction
- Check/Cash
- Credit Card

In cases where more than one payment option is available, the student must declare how fees will be satisfied. In most cases students who are sponsored, receive financial aid, elect payroll deduction, or credit card payment may satisfy fee payment

prior to exiting the OASIS Registration System. Students whose payment method is Check/Cash should screen print their fee invoice prior to exiting the system and pay in one of the following manners:

By Mail

The fee invoice along with check or money order (do not mail cash) should be mailed to the University of Georgia Treasurer's Office, Business Services Building, Athens, GA 30602-4227. Payment must be received by the fee payment deadline to avoid schedule cancellation.

At Late (Phase II) Registration

Students who register during late registration may pay by check or cash at the Treasurer's station located in Memorial Hall. (DO NOT MAIL LATE REGISTRATION FEES.)

At Cashier's Window

Payment may be made by cash or check during cashiering hours at the cashier's window located on the first floor of the Business Services Building, 424 East Broad Street.

At Night Depository

Payment may be made after hours until the fee payment deadline at the night depository located at the front of the Business Services Building, 424 East Broad Street.

TIME OF PAYMENT

Pre-Registration (Phase I)

Students who pre-registered during the current term for the next term must pay fees by the pre-payment deadline in order to avoid schedule cancellation. Those who fail to pay fees by the deadline will be dropped from the class rolls, and the class openings will be made available to others who register late.

Late Registration (Phase II)

Fees and charges for room and board are due and payable at the time of late registration. A student is not officially registered at the University until such fees and charges are paid in full. A late registration service charge will be assessed after the close of Phase II. If payment is not made by the end of the late

registration period, the student's registration will be canceled. Exceptions to the time of payment are outlined below.

DEFERRED PAYMENT OF FEES

Students who meet one of the following requirements may defer payment upon approval by the Treasurer's Office, Banking and Trust Department, Business Services Building, 424 East Broad Street:

1. Students whose fees are guaranteed and will be paid by an outside agency under an agreement with the University of Georgia up to the amount authorized for a specific academic term.
2. Students who have a University-administered loan or scholarship in process up to the amount of the aid granted for a specified academic term.
3. Foreign students who have a certificate or other acceptable documented evidence that payment of fees will be made after a statement of charges for the student has been presented for payment. The deferment will be limited to the amount stated in the certificate or other document for a specified academic term.
4. Students who are recipients of assistantships (at least one-third time) administered by the University may defer their fees.

Deferred fees will be due and payable as follows:

QUARTER

Fall	November 1
Winter	February 1
Spring	May 1
Summer	July 1

SEMESTER

Fall	November 1
Spring	May 1
Summer	July 1

FEE REFUNDS

In order to receive a refund of fees due to withdrawal from school, students must contact the Student Affairs Office and formally withdraw. (Note: withdrawal from school cannot be accomplished through drop/add after the first day of class). Students who formally withdraw from the University on or before the first day of class are entitled to a refund of 100 percent of fees paid for that term; withdrawal after the first day of class but before the end of the first 10 percent (in time) of the period of enrollment, 90 percent; withdrawal after the first 10 percent (in time) of the period of enrollment but before the end of the first 25 percent (in time) of the period of enrollment, 50 percent; withdrawal after the first 25 percent (in time) of the period of enrollment but before the end of the first 50 percent (in time) of the period of enrollment, 25 percent. Refunds will be made at the end of the term. No refunds for reduction in hours after the drop/add period are allowed unless such reduction is the fault of the University.

The following are not entitled to any refund of fees paid: students who withdraw after the first 50 percent (in time) of the period of enrollment, students suspended for disciplinary reasons, students who leave the University when disciplinary action is pending, or students who do not formally withdraw.

Students attending the University for the first time who receive assistance under Title IV of the Higher Education Act of 1965 as amended are entitled to a pro-rata refund of that portion of the tuition, fees, room and



board, and other charges assessed the student by the institution equal to that portion of the period of enrollment for which the student has been charged that remains on the last day of attendance by the student up to the sixty percent point in time in the period of enrollment. In the event a student receives Title IV aid and fails to complete registration and/or fee payment for the academic term for which financial assistance was awarded, the full amount of the Title IV aid received must be repaid immediately. In the event a student receives Title IV aid, completes registration, and subsequently reduces his/her enrollment status or withdraws, the amount of funds to be returned to the Title IV programs will be in accordance with federal regulations concerning refunds and repayments to the Title IV programs.

Refunds

All refunds, up to the amount of the aid received for the term, will be returned to the Title IV programs according to the following priority:

1. Federal Family Educational Loans
2. Federal Direct Student Loans
3. Federal Perkins Loans
4. Federal Pell Grants
5. Federal Supplemental Educational Opportunity Grants
6. Student Incentive Grants
7. Other federal sources of aid
8. Other state, private, or institutional aid
9. Student

Repayments

All repayments, up to the amount of the aid received for the term, will be returned to the Title IV programs according to the following priority:

1. Federal Perkins Loan
2. Federal Pell Grants
3. Federal Supplemental Educational Opportunity Grants
4. Student Incentive Grants
5. Other federal sources of aid
6. Other state, private, or institutional aid

Refunds for elective charges due to withdrawals during the term will be made on a prorated basis depending on the date of withdrawal.

Rules Governing the Classification of Students for Tuition Purposes in the University System of Georgia

1. (a) If a person is 18 years of age or older, he or she may register as an in-state student only upon a showing that he or she has been a legal resident of Georgia for a period of at least twelve months immediately preceding the date of registration.
(b) No emancipated minor or other person 18 years of age or older shall be deemed to have gained or acquired in-state status for tuition purposes while attending any educational institution in this State, in the absence of a clear demonstration that he or she has in fact established legal residence in this State.
2. If a person is under 18 years of age, he or she may register as an in-state student only upon a showing that his or her supporting parent or guardian has been a legal resident of Georgia for a period of at least twelve months immediately preceding the date of registration.
3. If a parent or legal guardian of a minor changes his or her legal residence to another state following a period of legal residence in Georgia, the minor may continue to take courses for a period of twelve consecutive months on the payment of in-state tuition. After the expiration of the twelve-month period, the student may continue his or her registration only upon the payment of fees at the out-of-state rate.
4. In the event that a legal resident of Georgia is appointed as guardian of a nonresident minor, such minor will not be permitted to register as an in-state student until the expiration of one year from the date of court appointment, and then only upon a proper showing that such appointment was not made to avoid payment of the out-of-state fees.
5. Aliens shall be classified as nonresident students; provided, however, that an alien who is living in this country under

an immigration document permitting indefinite or permanent residence shall have the same privilege of qualifying for in-state tuition as a citizen of the United States.

6. *Waivers*: An institution may waive out-of-state tuition for:

- (a) nonresident students who are financially dependent upon a parent, parents or spouse who has been a legal resident of Georgia for at least twelve consecutive months immediately preceding the date of registration; provided, however, that such financial dependence shall have existed for at least twelve consecutive months preceding the date of registration;
- (b) international students, selected by the institutional president or his authorized representative, provided that the number of such waivers in effect does not exceed one percent of the equivalent full-time students enrolled at the institution in the fall term immediately preceding the term for which the out-of-state tuition is to be waived. Institutions are authorized to approve an additional one percent for special cases such as superior out-of-state students in selected programs and/or additional international students.
- (c) full-time employees of the University System, their spouses, and their dependent children;
- (d) medical and dental residents and medical and dental interns at the Medical College of Georgia;
- (e) full-time teachers in the public schools of Georgia or in the programs of the State Board of Technical and Adult Education and their dependent children. Teachers employed full-time on military bases in Georgia shall also qualify for this waiver;
- (f) career consular officers and their dependents who are citizens of the foreign nation which their consular office represents, and who are stationed and living in Georgia under orders of their respective govern-

ments. This waiver shall apply only to those consular officers whose nations operate on the principle of educational reciprocity with the United States.

- (g) military personnel and their dependents stationed in Georgia and on active duty unless such military personnel are assigned as students to System institutions for educational purposes.
 - (h) selected graduate students at University-level institutions;
 - (i) students who are legal residents of out-of-state counties bordering on Georgia counties in which an institution of the University System is located and who are enrolled in said institution.
7. A student is responsible for registering under the proper residency classification. A student classified as a nonresident who believes that he/she is entitled to be classified as a legal resident may petition the Registrar for a change in status. The petition must be filed no later than sixty (60) days after the term begins in order for the student to be considered for reclassification for that term. If the petition is granted, reclassification will not be retroactive to prior terms. The necessary forms for this purpose are available in the Registrar's office.
8. Questions concerning classification for fee-payment purposes should be directed to one of the following persons:
- Undergraduate applicants for admission:*

Director of Admissions
212 Terrell Hall

Graduate applicants for admission:

Director of Graduate Admissions
534 Boyd Graduate Studies Research Center

Currently enrolled students:

Assistant Registrar
105 Academic Building.

Academic Information

The statements set forth in this Bulletin are for informational purposes only and should not be construed as the basis of a contract between a student and this institution. While the provisions of this Bulletin ordinarily will be applied as stated, the University of Georgia reserves the right to change any provision listed in this Bulletin including, but not limited to, academic requirements for graduation, without actual notice to individual students. Every effort will be made to keep students advised of any such changes. Information on changes will be available in the Registrar's Office, in the offices of the academic deans, and in the Office of the Vice President for Academic Affairs.

Undergraduate and Professional Degrees Offered by the University

The University will confer degrees upon candidates who have satisfied the prescribed regulations and conditions as follows:

- A *In the College of Agricultural and Environmental Sciences*, the degrees of Bachelor of Science in Agriculture (B.S.A.), Bachelor of Science in Agricultural Engineering (B.S.A.E.), Bachelor of Science in Biological Engineering (B.S.B.E.), and Bachelor of Science in Environmental Health (B.S.E.H.);
- B *In the Franklin College of Arts and Sciences*, the degrees of Bachelor of Arts (A.B.), Bachelor of Science (B.S.), Bachelor of Science in Chemistry (B.S. Chm.), Bachelor of Fine Arts (B.F.A.), Bachelor of Music (B. Mus.).

- C *In the Terry College of Business*, the degree of Bachelor of Business Administration (B.B.A.);
- D *In the College of Education*, the degree of Bachelor of Science in Education (B.S.Ed.);
- E *In the School of Environmental Design*, the degree of Bachelor of Landscape Architecture (B.L.A.);
- F *In the College of Family and Consumer Sciences*, the degree of Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.);
- G *In the D. B. Warnell School of Forest Resources*, the degree of Bachelor of Science in Forest Resources (B.S.F.R.);
- H *In the Henry W. Grady College of Journalism and Mass Communication*, the degree of Bachelor of Arts in Journalism (A.B.J.);
- I *In the School of Law*, the degree of Juris Doctor (J.D.);
- J *In the College of Pharmacy*, the degree of Bachelor of Science in Pharmacy (B.S. Phar.), the degree of Doctor of Pharmacy (Pharm.D.);
- K *In the School of Social Work*, the degree of Bachelor of Social Work (B.S.W.);
- L *In the College of Veterinary Medicine*, the degree of Doctor of Veterinary Medicine (D.V.M.).

DUAL DEGREES

A graduate of any program may receive the baccalaureate degree of any other program by completing the additional studies required in that program. The minimum resident requirement is 30 semester hours. Courses taken in residence at the University of Georgia for the purpose of meeting program requirements for one degree may be

counted toward the resident requirement for the second degree. (Students not enrolled at the University for a period of five years or more must complete 30 semester hours in residence for the second degree in addition to the courses taken to satisfy the first degree.) Individual schools and colleges within the University may impose additional resident requirements. Eligibility for graduation with academic honors does not apply to the second baccalaureate degree. Students pursuing an additional major within the same degree objective are considered to be enrolled for a double major.

MINOR FIELDS OF STUDY

A minor program comprises 15 to 18 semester hours of advanced courses (numbered 3000 or above) in a field of study other than the student's major. The intent of establishing minor fields of study is to offer students the opportunity to broaden their education through the minor field. The selection of a minor field of study should be made to fulfill this goal.

The availability of a minor is noted in this Bulletin alongside the description of the corresponding major or certificate program. The department shall publish and make available to students the requirements for the minor—the total number of hours required, along with the enumeration of any particular courses that are mandated or excluded, residency requirements (if any) for the minor courses, and grade requirements for minor courses if those requirements differ from the general University standard for credit (a D as the minimum passing grade). The University Curriculum Committee has determined that if a course satisfies a major requirement it cannot also be used to satisfy course requirements in the minor field of study.

A student may select a minor in consultation with his or her advisor. The student may then consult an advisor in the minor field who can inform the student of remaining requirements for the minor. When the student has met the requirements for the minor, the advisor in the minor field will then certify that fact to the student's dean. The



completed minor will be recorded on the student's permanent transcript, but not on the diploma. For students completing a minor before graduation, the minor will appear on the transcript at the time of graduation. For students completing a minor after graduation, the statement shall appear on the transcript in chronological order following the courses taken subsequent to graduation. A student must be enrolled at the time a minor is approved by the Board of Regents, or subsequent to that date, to receive credit for the minor. A student may have more than one minor.

MILITARY COMMISSIONS

A student who satisfactorily completes the advanced ROTC program may be commissioned as second lieutenant in the U.S. Army or U.S. Air Force in conjunction with the degree. Detailed information concerning the Army and Air Force ROTC programs may be found under "Division of the Armed Services."

Degree Requirements

THE UNIVERSITY OF GEORGIA CORE CURRICULUM

The core curriculum was established within the University System of Georgia as a means of facilitating the transfer of credit for students at the lower division level as they work toward baccalaureate degrees within University System colleges and universities. The various institutions within the University System, in establishing their core curricula, provide for (1) 60 semester credit hours of which a minimum of 42 are in general education and 18 in major-related courses; (2) assurances that all courses satisfactorily completed in the core curriculum of any unit of the University System will be acceptable and transferable to other units of the University System; and (3) the preservation of the maximum possible amount of institutional autonomy.

Briefly, the Core Curriculum includes:

HOURS

AREA A: Essential Skills	9-10
English and math courses common throughout the University System.	
AREAB: Institutional Options	4-5
UGA students select these courses with the assistance of academic advisors.	
AREA C: Humanities/Fine Arts	6
Two courses selected from an approved list with the assistance of academic advisors.	
AREAD: Science, Mathematics and Technology	10-11
Two science courses and one mathematics/technology course.	
AREA E: Social Sciences	12
Four courses which may also satisfy history and constitution requirements.	
AREA F: Courses Related to the Program of Study	18

Courses which may be used to satisfy core requirements are listed in the Programs of Study section of this Bulletin.

ENGLISH, MATH, SCIENCE, AND PHYSICAL EDUCATION REQUIREMENT

Upon completion of 60 semester hours, exclusive of courses in academic assistance and remedial courses, all undergraduate students must have met the following four conditions:

1. Satisfied the Freshman English requirement.
2. Earned or exempted at least three semester hours in a course that will satisfy the mathematics requirement appropriate to the student's degree and major.
3. Earned at least three semester hours in a lab science course, or the appropriate required core curriculum science course.
4. Earned one semester hour in a basic physical education course or courses.

Students who have not satisfied these requirements upon completion of 60 credit hours shall be required to register at their next enrollment for the necessary courses that will satisfy these requirements.

Transfer students entering with 60 or more credit hours must satisfy these requirements prior to completing 30 college-level credit hours at the University of Georgia.

Undergraduate professional students in Forest Resources, Journalism, Pharmacy, and Social Work shall be subject to these requirements. Transient students, non-degree students, and students with a prior baccalaureate degree shall be exempt from this policy.

This policy will be effective for students entering the University in the fall of 1990 or later, except that the requirement to earn one semester hour in a basic physical education course or courses shall be effective for students who matriculate fall quarter 1991 or later. Any of these requirements may be satisfied through entrance or placement exams, or through transfer credit.

ENVIRONMENTAL LITERACY REQUIREMENT

All students who matriculate in fall 1993 and thereafter must attain knowledge of basic principles concerning environmental issues. Consult school and college advisors for details on how this requirement may be satisfied. This requirement pertains only to the first baccalaureate degree; it does not apply to any subsequent degrees.

EXAMINATIONS ON THE CONSTITUTIONS

Examinations on the Constitution of the United States and that of the state of Georgia are required of all persons receiving a degree from the University, including those transferring Political Science 1101-1101D from institutions outside the state unless exempted by courses dealing with these constitutions. Approved courses for

exemption are as follows:

U.S. Constitution

POLS 1101-1101D
POLS 1105H
POLS 4700
POLS 4710
HIST 2111 and 2112
HIST 2111 and 2112H
HIST 2111H and 2112H
HIST 2111H and 2112

U.S. and Georgia Constitution

POLS 1101-1101D (taken in Georgia)
POLS 1105H (taken in Georgia)
HIST 4100

Georgia Constitution

POLS 2201 (University System course; not offered at UGA, but may be offered at other System institutions)
POLS 4650 (taken in Georgia)
POLS 4660
HIST 4100

Examinations are given once each semester; dates are announced in the *Schedule of Classes*. Students who fail the examination must satisfy the requirement with course work. No re-examination is permitted.

EXAMINATIONS ON UNITED STATES AND GEORGIA HISTORY

An examination on the history of the United States and Georgia is required of all persons receiving a degree from the University unless exempted by one of the following courses: HIST 2111, HIST 2112, HIST 2111H, HIST 2112H, HIST 3080, HIST 4100.

Examinations are given to freshmen during orientation and twice each semester by the History Department. Reexamination is permitted. Examination dates are announced in the *Schedule of Classes*.

REGENTS' TESTING PROGRAM

Each institution of the University System of Georgia shall assure the other institutions, and the System as a whole, that students obtaining a degree from that institution

possess certain minimum skills of reading and writing.

The Regents' Testing Program has been developed to help in the attainment of this goal. The objectives of the Testing Program are: (1) to provide System-wide information on the status of student competence in the areas of reading and writing; and (2) to provide a uniform means of identifying those students who fail to attain the minimum levels of competence in the areas of reading and writing.

Passing the Regents' Test is defined as having passed all components of the test by scoring above the cutoff score specified for each component. The test may be administered either in its entirety or as one or more components depending on the needs of the students. If one component of the test is passed, that component need not be retaken.

A student holding a baccalaureate or higher degree from a regionally accredited institution of higher education will not be required to complete the Regents' Test in order to receive a degree from a University System institution.

In order to implement effectively the goals of the Testing Program:

1. Students enrolled in undergraduate degree programs shall pass the Regents' Test as a requirement for graduation. Students, including transfer students and/or readmitted students, may take the test after they have completed the required basic core English courses. They will be required to take the test in the semester after they have earned 30 hours of college-level credit if the test has not been passed previously.
2. All students who have not passed the Regents' Test during the semester in which they will have earned 45 credit hours shall be required to take non-degree credit courses in remedial reading and/or remedial writing in each subsequent term of attendance until they have passed all components of the test.
 - a. No enrolled student required to take a remedial course may retake the Regents' Test until the appropriate course is completed with an S grade.

- b. Failure to complete the remedial course(s) satisfactorily will result in a U posted on the student's permanent record, prohibiting the student from registering to retake the Regents' Test. Additionally, the remedial course(s) must be repeated each term until the Regents' Test requirement is satisfied.

3. Having passed the Regents' Test shall not be a condition of transfer into an institution. Students transferring from System programs which require the test shall be subject to all provisions of this policy. Students from institutions outside the System, or from System programs not requiring the test, who transfer into a System institution with 30 or more college-level credit hours shall take the test no later than their second semester of enrollment and in subsequent terms shall be subject to all provisions of his policy.
4. Students whose native tongue is not English may choose to take an alternate version of the Regents' Exam to certify literacy competence. The Writing Center, 72 Park Hall, offers an alternate examination at approximately the same date as the usual exam. Otherwise, all stipulations included in this section apply to international students. International students may contact the Writing Center at 542-2119 or via e-mail addressed to: wrctr@parallel.park.uga.edu.
5. For extraordinary situations, each institution shall develop special procedures for certifying the literacy competence of students. A written description of those procedures shall be submitted to the Chancellor for approval. A record of the action shall be reported by the Chancellor to the Education Committee of the Board of Regents. Such procedures shall include provision for remediation if needed and formal examination prior to certifying competency. Such examination shall equal or exceed the standards of the Regents' Testing Program.
6. Students may request a formal review of their failure on the essay component of the Regents' Test if their essay received at least one passing score among the

three scores awarded and if they have successfully completed the courses in English composition required by the local institution. This review will be conducted in accordance with Board-approved procedures.

7. Remedial work as required under the above policy shall be in keeping with regulations in satisfaction of federal and state student financial assistance and other such eligibility programs.
8. These regulations shall not prohibit institutions from increasing requirements affecting the Regents' Testing Program, provided such increased requirements are authorized by the Chancellor, and provided further that such requirements are published in the official bulletin of the institution prior to implementation. Such additional requirements shall in no way affect the transfer of students from one institution to another or the readmission of students to institutions of the University System.

Students' Review Procedures— Regents' Testing Program

1. The review will be initiated at the campus level, with procedural matters to be determined by the institution. The on-campus review, however, will be conducted by the three (3) faculty members designated by the institution as a review panel.
2. The on-campus review panel may (a) sustain, by majority opinion, the essay's failing score, thus terminating the review process, or (b) recommend, by majority opinion, the re-scoring of the essay by the Regents' Testing Program central office. The student will be notified concerning the results of the on-campus review.
3. If the on-campus panel recommends re-scoring of the essay, that recommendation will be transmitted in writing, along with a copy of the essay, to the office of the system Director of the Regents' Testing Program. The Director will utilize the services of three (3) experienced Regents' essay scorers other than those involved in the original scoring procedures for the essay component of the Regents' Test. The decision of this panel on the merits of the essay will be final, thus terminating the review process. The student will be notified through the institution concerning the results of the review.

BASIC PHYSICAL EDUCATION

1. All students entering the University fall 1991, and thereafter, who matriculate for their first baccalaureate degree are required to pass one semester credit hour of basic physical education. This requirement may be satisfied by successful completion of any combination of basic physical education courses. Basic physical education courses are designated PEDB 1010-1990; courses for physical education majors (PEDS), health promotion and education majors (HPRB) or recreation majors (RLST) will not satisfy the basic requirement. This requirement shall not apply for those entering a second or subsequent bachelor's degree program. The total number of credit hours in basic physical education courses that may be applied toward an undergraduate degree will be determined by individual schools and colleges. Undergraduate students entering fall 1991 or later must satisfy the basic physical education requirement prior to completion of 60 semester hours. Students entering the University prior to fall 1991 and who graduate fall 1991 or later may at their option choose whether they will be governed in their degree requirement by the basic physical education requirement at the time they matriculated or by the new requirement.
2. All students entering the University fall 1977 through summer 1991 who matriculate for their first baccalaureate degree are required to pass five quarter hours (or its semester equivalent) of basic physical education. This requirement may be satisfied by successful completion of any combination of basic physical education courses. Basic physical education courses are designated PEDB 1010-

1990; courses for physical education majors (PEDS), health promotion and education majors (HPRB) or recreation majors (RLST) will not satisfy the basic requirement. This requirement shall not apply for those entering a second or subsequent bachelor's degree program. The number of credit hours which may be applied toward an undergraduate degree will be determined by individual schools and colleges.

3. All baccalaureate degree candidates who entered the University prior to fall 1977 are required to satisfy six courses of basic physical education. Students entering the University with 60 semester hours or more credit will be considered to have met this requirement. Students transferring fewer than 60 semester hours will exempt one course in basic physical education for each fifteen hours of credit transferred. A maximum of six credit hours may be applied toward a degree.

The above requirements are applicable to all students except as follows:

1. **Veterans:** Veterans who have served 180 days or more may receive credit based on their military service depending on date of matriculation. Veterans may receive no more credit for basic physical education courses than is required for a degree. To establish credit, veterans will be required to present a copy of their DD214 form to the Admissions Office.
2. **Disabled Students:** Adapted physical education classes are available to facilitate the meeting of the University physical education requirement by disabled students. Policies with regard to physical education for disabled students are as follows:

The School of Health and Human Performance is committed to fulfilling the physical education needs of all students. An adapted physical education program operates as a normal extension of the basic physical education program for students who, because of temporary or permanent disability or medical conditions, cannot participate in the mainstream physical education program. It is through this adapted program that, with

few exceptions, all students are able to satisfy the basic physical education requirement. Students with health problems or disabilities should consult with the Staff Physician at the University Health Service. Students will in turn be referred to the adapted physical education specialist who works in concert with the University Staff Physician, and subsequently will be placed in appropriate physical education activities.

There are no exceptions to the physical education requirement for reasons of age, sex, or disability except upon special recommendation by the Staff Physician at the University Health Service.

ENGLISH 1101 AND 1102

English 1101 and 1102 (English Composition) are required for all undergraduate degrees from the University of Georgia. A grade of C or better is required for English 1101 and an average of 2.0 or better is required for both courses.

Transfer students not receiving freshman English credit for writing courses taken at other institutions should bring catalog descriptions of those courses for review to the Freshman English Office, 135 Park Hall.

RESIDENT REQUIREMENT

Students who are candidates for a baccalaureate degree for fall 1995 and thereafter must earn 40 of the last 60 semester credit hours in residence. In addition, 12 of the semester credit hours required for a student's major must be earned in residence. Courses which are remedial in nature and are numbered less than 1000 shall not be counted in satisfaction of this requirement. Students may receive resident credit for University-sponsored studies abroad programs for which course registration and fee payment are effected through the University. University of Georgia students participating in a University-approved academic program (such as the National Student Exchange) are exempt from that part of the residency requirement that states 40 of the last 60 semester credit hours be completed at the University; in such cases students need

only complete 40 semester hours at the University in order to satisfy the residency requirement. Credit earned through programs sponsored by other institutions, organizations, or approved student exchange programs will be recorded as transfer credit.

Students who present acceptable college credit earned before September 1960, or who are enrolled for a second baccalaureate degree, may satisfy the resident requirement by completing in residence 30 semester hours in courses numbered 2000 and above with a cumulative average grade of 2.0 or better. Students enrolled in the combined B.S.-M.D. program with the Medical College of Georgia may satisfy the resident requirement at the University by completing 30 semester hours in residence in courses approved by the Dean of the Franklin College of Arts and Sciences.

General Academic Regulations and Information

THE ACADEMIC YEAR

The college year has three semesters of approximately fifteen weeks each: fall semester, latter part of August to Christmas holidays; spring semester, January to early May; summer semester, June to latter part of August. Exact semester dates appear in the University calendar.

Students may enter the University at the beginning of any semester. Only one commencement will be held each year in May recognizing graduates from the previous summer and fall semesters as well as candidates for spring graduation. Prospective summer candidates may participate in the May ceremony but may not wear regalia associated with honors status.

UNITS OF CREDIT

The unit of credit is the semester hour, representing one hour of in-class work per week for one semester or its equivalent in other forms of instruction. Two or sometimes three hours of laboratory work are

considered as the equivalent of one hour of class work.

Most University courses meet three times a week for one semester and carry a credit of three semester hours.

ACADEMIC WORKLOAD

The normal academic work load during the academic year is 15 hours per semester for undergraduates and 12 hours per semester for graduate students. In programs requiring more than 120 hours for graduation, the load per semester may be somewhat higher. Undergraduate students must carry 12 hours per term and graduate students 9 hours per term to be certified as full-time students. Undergraduate students must carry six hours per term and graduate students five hours per term to be certified as one-half time students. Full-time status may vary during the summer session.

During their work term, students participating in the Cooperative Education Program will be certified by the Registrar's Office as being enrolled as full-time students.

ACADEMIC ADVISING

Academic advisement is considered an essential part of the student's educational experience at the University of Georgia. Academic advisors are assigned to each student to assist in various areas of academics, including preregistration each semester, choosing a major, and planning a program of study. Advisors aid students in making certain that all educational requirements of both the University and the specific degree program are met. Advisors cannot provide a guarantee of graduation and/or certification within a specified period of time. Therefore, selection of appropriate courses to meet degree requirements is ultimately the student's responsibility.

STUDENT RESPONSIBILITY

It is especially important that each student knows it is his/her responsibility to keep apprised of current graduation requirements for a particular degree program.

ACADEMIC HONESTY

The University of Georgia seeks to promote and ensure academic honesty and personal integrity among students and other members of the University community. A policy on academic honesty (and procedural guidelines for adjudication of alleged violations of academic honesty) has been developed to serve these goals. Academic honesty means performing all academic work without cheating, lying, tampering, stealing, receiving assistance from any other person or using any source of information that is not common knowledge (unless that assistance or use is authorized by the person responsible for supervising that academic work or fairly attributed to the source of assistance or information).

Academic honesty is vital to the very fabric and integrity of the University of Georgia. All students must comply with an appropriate and sound academic honesty policy and code of honest behavior. All members of the University community are responsible for and involved in bringing about an honest University and all must work together to ensure the success of the policy and code of behavior.

To preserve and enhance the University's academic honesty policy, the Student Government Association proposed a student Honor Code that was approved by the University Council in May 1997. The Honor Code appears on the University's application for admission and states, "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." All applicants for admission to the University must sign this statement as part of the admission process.

Specific regulations governing student academic conduct are contained in the policy manual, *A Culture of Honesty*, and these should be read to avoid any misunderstanding. All members of the academic community are responsible for knowing the policy and procedures on academic honesty. The policy manual has been made available to students and faculty through deans and department heads to assure understanding of the academic honesty system and its proper functioning.



Students and faculty who suspect that an act of academic dishonesty has taken place should contact the Office of the Vice President for Academic Affairs, 210 Old College, (706) 542-6777.

STUDENTS' RIGHT OF APPEAL

University of Georgia students have the right to appeal academic decisions. Usually the appeal goes first to the unit responsible for the decision (for example, grades to the faculty members who assigned the grades; department requirements to the department; college or school requirements to the school; university requirements to the Educational Affairs Committee). An unfavorable ruling at one level can be appealed to the successive levels (viz., a faculty decision can be appealed to the department; a department ruling can be appealed to the college in which the instructional unit is located; a college-level ruling can be appealed to the Educational Affairs Committee; the Educational Affairs Committee ruling can be appealed to the President of the University; and, except for grade appeals, the President's ruling can be appealed to the Board of Regents).

All grade appeals must be initiated within one calendar year from the end of the term in which the grade was recorded. Additional details on appeals of academic matters, including special provisions for academic

dishonesty cases, can be obtained from the Office of the Vice President for Academic Affairs, 210 Old College, (706) 542-8947.

CLASSIFICATION OF STUDENTS

In the undergraduate schools and colleges, students will be classified according to the number of academic hours they have earned.

<i>Classification</i>	<i>Hours Earned</i>
Freshman	Less than 30 hours
Sophomore	At least 30 hours
Junior	At least 60 hours
Senior	At least 90 hours

Junior Division and Senior Division

Some of the undergraduate schools and colleges further classify their students as junior division students or senior division students. In general, a junior division student is a freshman or sophomore; a senior division student is a junior or senior, and has completed at least 60 semester hours.

Law or honors students may enroll in graduate courses with the approval of their advisor, the course instructor, the graduate coordinator of the department in which the course is offered, and the Graduate Dean. Approval must be secured prior to registering for the course. Appropriate applications are available in the Honors Office and in the Law School.

COURSES AND CREDIT

Course Numbers

Courses numbered less than 1000 are either non-credit or academic assistance courses; those from 1000 to 1099 are designed for freshman and sophomore (junior division) students; those numbered 2000 to 2099 are mainly sophomore courses but, in special instances when justified by course and curricular requirements, may be given senior division (junior and senior) classification. Courses numbered 3000 to 3099 are generally designed for mixtures of junior and senior level students. Courses taken by juniors and seniors along with graduate students carry the numbers 4000 to 5099 for undergraduates and 6000 to 7099 for

graduate students. Courses numbered 8000 or 9000 are open only to graduate students. Courses which carry an H suffix are Honors courses.

Course Changes

It is the responsibility of students to select the appropriate courses for their degree program. If students are uncertain as to their degree requirements, they should consult with their academic advisor/dean prior to scheduling.

Students are expected to attend classes on a regular basis during the drop/add period. A student who incurs an excessive number of absences may be withdrawn from the class at the discretion of the professor. Students who find it necessary to make adjustments in their class schedules during the drop/add period must follow the procedures and adhere to the deadlines and dates published in the *Schedule of Classes*. No course may be added to a student's schedule after the first fourteen calendar days of a term, with the exception of a research, dissertation, or thesis course at the graduate level.

Fee Adjustments—Tuition is charged on a per semester hour basis for up to 12 hours. Full tuition is charged for 12 or more semester hours. If a schedule change results in an additional fee being due, the student should report to the Treasurer's Office to pay additional fees. No academic credit will be given unless all fees are paid by the end of the drop/add period.

Course Auditing

Students may audit courses with the approval of their academic dean and the department offering the course. The registration procedure is the same as registration for credit except that the auditor must request audit status at the time of registration.

Fees for auditors are the same as those for students registered for credit. After the drop/add period, credit registrations may not be changed to audit, and audit registrations may not be changed to credit registrations.

Course Challenging

Insofar as accrediting policies permit, the University allows a student the opportunity to receive resident credit for courses by examination without attending the regular classes. Although specific standards of eligibility for challenging a course vary somewhat among the schools and colleges, in general the student must (1) demonstrate to the department in which the course is offered evidence of independent study to master the materials required in the course; (2) not be currently enrolled in the course to be challenged, nor have previously completed the course; and (3) be currently enrolled in the University. Upon completion of the course challenge the instructor will complete and file an official Course Challenge Form with the Registrar of the University.

Based upon the results of the examination, regular grades of A, B, C, D, or F are assigned for the challenged course unless the course is not one authorized to receive these grades, in which case the appropriate grade will be assigned from among those available for the course.

Some courses cannot be challenged. A student should check with the dean or department head regarding the procedure for challenge within a particular school/college.

Class Attendance

Students are expected to attend classes regularly. A student who incurs an excessive number of absences may be withdrawn from a class at the discretion of the professor.

Withdrawal from Courses

Students who wish to withdraw from a course should initiate the withdrawal procedure within the instructional department or with their advisor, if required by their school or college. Instructors who wish to withdraw a student from a course because of excessive absences should initiate the withdrawal procedure within the instructional department. (The term "excessive absences" is defined in the syllabus for the course.)

The instructional department should forward the completed withdrawal form with the instructor's signature and grade assignment to the Registrar's Office. Withdrawal forms for graduate students must be routed through the Graduate Records Office.

Students who withdraw from a course should be aware of the fact that a reduction in their course load because of withdrawal may affect their financial aid, their athletic eligibility, and/or their full-time student status. Students should contact the appropriate office if they have questions about the impact of their withdrawal from a course. Students who are returning from academic dismissal are advised to consult with their academic advisor prior to withdrawal. Veterans and dependents of veterans who receive educational benefits must notify the Office of Veterans Education Benefits in the Office of the Registrar of any course load reductions.

An undergraduate student who withdraws from a course or is withdrawn by the instructor for excessive absences prior to the midpoint of a semester is assigned a grade of W or WF by the instructor. A student who withdraws or is withdrawn for excessive absences after the midpoint of the semester (date to be specified in the *Schedule of Classes*) is assigned a grade of WF, except in those cases in which the student is doing satisfactory work and the withdrawal is recommended by the Office of Student Affairs because of emergency or health reasons.

Anytime a drop or withdrawal is initiated by someone other than the instructor, the instructor and the student will be notified by the Registrar's Office that the student has been dropped or withdrawn from the class. If a student is withdrawn from a class, the instructor must be allowed the opportunity to provide a grade for the course.

No instructional unit shall drop a student for lack of a prerequisite after the end of one calendar week from the beginning of the term.

No refunds for a reduction in hours due to a withdrawal are authorized. Only credit hour reductions effected by the drop/add process will generate a refund.

A grade of W signifies that the student was passing the course at the time of withdrawal. Such a grade, even if the course was withdrawn from for medical reasons, does not relieve the student from the regular probation and exclusion rules. For more information, see "Academic Probation" and "Academic Dismissal."

Forfeiture of Course Credit

By registering for and receiving a grade in a course for which credit hours have already been granted, either by work at the University or by transfer, a student forfeits the previous credits in that course.

Military or Extra-Institutional Experience and Credit

United States Armed Forces Institute (USAFI) courses are not recognized by the University unless they are completed through an accredited institution which grants recognized college credit for same. Such courses are regular correspondence courses and are administered under the Cooperating College Program of USAFI.

Inquiries concerning in-service training should be directed to the Director of Admissions. Evaluations of this training will not be made until such time as the student is accepted for study on the University campus.

College Level Examination Program (CLEP) Tests

Credit may be granted in certain subject areas for satisfactory completion of the College Level Examination Program (CLEP) Tests. Students with prior credit in the field or a related field of the subject area involved will not be granted credit. The University administers these tests through the Testing and Evaluation Center. In general, they are also administered by the education officer on military posts or by centers established by the College Board, of which the University is one.

FINAL EXAMINATIONS

Final Examination Policy

A final examination schedule is published each semester by the Vice President for

Academic Affairs and a preliminary copy is printed in the official *Schedule of Classes* publication each term. No time and date departures from the examination schedule should occur without prior approval of the dean of the school or college and the Vice President for Academic Affairs. Similar advance approval also must be obtained to administer standardized, departmental "mass" examinations to groups of students enrolled in the same course.

Although there are special courses where a final examination of the regular type may not be appropriate, each student must be provided the opportunity to stand for a final examination as part of the completion of a full instructional term. Each instructor has the authority to design and administer the final examination in whatever manner is appropriate. Additionally, the instructor has the authority to structure the course syllabus and content so that the final examination may be a summative evaluation of the entire term's work or a portion of the term's work.

Admission to Course Examinations

Students who have not registered for the course will not be admitted to the final examination, and only under extraordinary circumstances will they be admitted to the examination unless they have attended at least 50 percent of the total class and laboratory exercises held in the course.

GRADES

Grading System

The grading system for the University of Georgia is as follows:

- A** Excellent
- B** Good
- C** Satisfactory
- D** Passing
- F** Failure

WF Withdrew, failing. This grade indicates that the student was permitted to withdraw from the course while doing unsatisfactory work. Withdrawal from a course under these circumstances is equivalent to a failure. This grade is included in the academic average.

I Incomplete. This symbol indicates that a student was doing satisfactory work but, for non-academic reasons beyond his/her control, was unable to meet the full requirements of the course. If an I is not satisfactorily removed after two semesters, the symbol I will be changed to the grade F by the appropriate official.

W This symbol indicates that a student was permitted to withdraw without penalty. Withdrawals without penalty will not be permitted after the midpoint of the semester (date to be specified in the *Schedule of Classes*) except in cases of hardship as determined by the appropriate official.

S This symbol indicates satisfactory participation in certain required courses. Normally S grades are given in a limited number of professional, seminar, or graduate-level courses. Credit is included in hours earned. The grade is not included in the academic average.

U This symbol indicates unsatisfactory performance in certain required courses in which S grades may normally be given. No credit is given.

The grade is not included in the academic average.

V This symbol indicates an audit. No credit is given. The grade is not included in the academic average.

K This symbol indicates that a student was given credit for the course via a credit by examination program approved by the faculty; e.g., CLEP, AP, Proficiency, etc.

ER This symbol indicates an error in reporting. ER's not removed by the end of the semester subsequent to their assignment will be converted to grades of WF.

NR This symbol indicates that a grade was not received by the Registrar's Office in time for processing. The NR symbol will be replaced by a grade upon receipt of an official grade change form from the instructor.

The cumulative grade point average is based on all residence hours attempted at the University exclusive of S and U grades.

Conversion of Letter Grades to Grade Points

For purposes of computing grade point averages, letter grades are converted into numerical equivalents:

A	4.0	I*
B	3.0	S*
C	2.0	U*
D	1.0	V*
F	0	K*
WF	0	W*

*Not computed

Grade Reports

Grade reports will be mailed directly to students at their permanent address at the end of the semester grading period.

Minimum Grade Point Average

A minimum cumulative grade point average of 2.00 is required to meet all undergraduate graduation requirements. A student will not be approved for graduation if he or she has a grade of I which, when changed to a



recorded grade, could cause the student's grade point average to fall below the minimum required for graduation. This policy applies to students for all degrees conferred by the University.

Change in Grades

A grade in a course recorded by the Registrar cannot be changed except in the following circumstances:

A symbol of I not removed after two semesters becomes an F.

A symbol of ER not removed after one semester becomes a grade of WF.

Any grade will be changed upon a written statement by the instructor that the grade was a factual error. All grade changes are subject to approval by the instructor's department head and the Dean's Office.

ACADEMIC HONORS

Graduation with Honors

The University awards degrees with honors to candidates who meet specified standards of academic excellence. In order to be considered for a degree with honors, a student must meet the following requirements:

1. Graduating seniors whose first matriculation at the University of Georgia occurred



in September 1977 or thereafter will be recommended for graduation with honors on the basis of their *overall* grade point average for all college-level work attempted. The overall grade point average or all-college average includes all work attempted at the University of Georgia as well as all college-level transfer work attempted prior to or subsequent to matriculation at the University. Respective standards are as follows:

HONORS DESIGNATION	REQUIRED OVERALL GPA
Summa cum laude	3.90
Magna cum laude	3.70
Cum laude	3.50

Only first baccalaureate degree candidates are eligible for graduation with honors.

2. Graduating seniors whose first matriculation at the University of Georgia occurred between September 1975 and summer 1977 will be recommended for graduation with honors on the basis of their overall grade point average for all college-level work attempted. The overall grade point average or all-college average includes all work attempted at the University of Georgia as well as all college-level transfer work attempted prior to or subsequent to matriculation at the University. Respective standards are as follows:

HONORS DESIGNATION	REQUIRED OVERALL GPA
Summa cum laude	3.90
Magna cum laude	3.60
Cum laude	3.30

Only first baccalaureate degree candidates are eligible for graduation with honors.

3. Graduating seniors whose first matriculation at the University of Georgia occurred prior to September 1975 will be recommended for graduation with honors on the basis of the grade point average and scholastic standards in effect at the time they first matriculated as listed in the 1973-75 and 1975-77 University Bulletin.
 - a. Minimum of 60 semester hours in residence after reaching junior classification.

- b. Based on all credit attempted in the semester in which hours attempted equal a minimum of 60.
- c. All hours attempted in the final semester before graduation included.
- d. Respective standards as follows:

Summa cum laude	3.90
Magna cum laude	3.60
Cum laude	3.30

In order to qualify for honors graduation, a student must have a minimum of 50 semester hours in which a letter grade (A,B,C,D, or F) was assigned.

First Honor Graduate

Beginning with the August 1977 graduating class, each student completing his/her first baccalaureate degree with an overall grade point average of 4.0 will be designated a First Honor Graduate.

Presidential Scholar and Dean's List

The University encourages excellence in scholarship and gives recognition to students whose work is superior by publishing the Presidential Scholar and Dean's Lists from each school or college at the end of each semester. To be named a presidential scholar, students must have achieved during the preceding semester a grade point average of 4.00, earned at least 12 hours in courses numbered 1000 or higher, and received no unsatisfactory or incomplete grades. To be named to the Dean's List, students must have achieved during the preceding semester a grade point average greater than or equal to 3.50 but less than 4.00; earned at least 12 hours in courses numbered 1000 or higher; and received no grades below a B, no unsatisfactory grades, and no incomplete grades.

Honor Fraternities and Societies

Several honor fraternities and societies at the University extend recognition to students on the basis of scholarship and good character. There are chapters of Phi Beta Kappa, Sigma Xi, Phi Kappa Phi, and many college, school, and departmental honor societies.

Honors Day

Honors Day was introduced to give public recognition to students who achieve high scholastic records. Undergraduate students who are in the first five percent of their classes, based on cumulative grade point averages, are included in the Honors Day program.

GRADUATION REQUIREMENTS

Candidates for degrees must show that they have met all general University requirements for such matters as registration and payment of fees and special requirements of the college or school in which they have been registered.

Changes in graduation requirements shall not be made retroactively unless there is clear and compelling reason for doing so. Graduation requirements will be determined as follows:

- a. The general university requirements stated in the Bulletin that is current at the time a student matriculates as an undergraduate or graduate student at the University will be the general University requirements which the student must meet for graduation.
- b. Requirements imposed by colleges or free-standing schools for graduation will be determined by the Bulletin that is current at the time a student transfers to or enters the college or free-standing school.
- c. Requirements for a major, a certificate program, or a minor will be determined by the Bulletin that is current at the time a student declares a major, a minor, or certificate program.
- d. The University, a college or school, a department, or a certificate program may permit students who matriculate at the University or who enter a college/school or major under one set of courses or graduation requirements to elect for the requirements that have been instituted since students matriculated at the University or entered a college/school or major, minor, or certificate program.
- e. Undergraduate students who have not been enrolled at the University for a

period of five years or more may be subjected to different University, college or school, or department requirements than those which existed at the time of matriculation at the University or entry into a given college/school, major, minor, or certificate program.

Application for Graduation

Currently enrolled students pursuing undergraduate and professional degrees will have applications for graduation automatically generated based upon their having earned a specified number of hours toward their degree with a minimum number of these hours also having been earned in residence.

In general, students who are in the first semester of their final year of study will have applications for graduation generated for the following term. Since degree program hours vary among the schools and colleges, students should contact their respective dean's office during the first semester of their last year of study to ensure that graduation requirements will have been met on a timely basis.

Once applications for graduation have been generated, students may make changes to the expected date of graduation through OASIS by accessing the "Expected Graduation Term" as listed on the Student Registration Main Menu.

Commencement

The University holds one formal commencement each May. All students graduating during the academic year are invited to participate. All diplomas are mailed following graduation each semester. Graduating students are responsible for maintaining a current permanent home address or informing the Registrar's Office of a diploma mailing address.

Prospective summer semester graduates shall be listed in the May undergraduate commencement program of that calendar year as candidates for graduation without designation of honors status. These students may participate in the commencement ceremony but may not wear regalia associated with honors status. Summer semester graduates will be listed as graduates in the

undergraduate commencement program for the subsequent May. Any honors designation for which they qualify will be listed in that commencement program.

The University reserves the right to withhold the degree of any student who has completed all academic requirements when disciplinary charges are pending or when there is a pending disciplinary action equivalent to suspension or expulsion.

STUDENT EDUCATION RECORDS

The federal Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They include the following:

- (1) The right to inspect and review the student's education records, subject to certain specific exceptions. A student wishing to review his/her education records should submit to the registrar, academic dean or other appropriate official a written request that identifies the records he/she wishes to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official will advise the student of the correct official to whom the request should be addressed.
- (2) The right to request the amendment of the student's education records. A student may ask the University to amend a record that he/she believes is inaccurate or misleading. The student should write the University official responsible for the record, clearly identifying the part of the record he/she wants changed and specifying how it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his/her right to a hearing as well as the hearing procedures.
- (3) The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA autho-

rizes disclosure without the student's consent. One exception is disclosure to other University officials who have been determined to have a legitimate educational interest in the information. A University official is a person employed by the University in an administrative, supervisory, academic, research, or support staff position; a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents of the University System of Georgia; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another University official in performing his/her duties. A University official has a legitimate educational interest if the official needs to review an education record in order to perform his/her official duties.

Upon request, the University also discloses education records without the student's consent to officials of another school in which a student seeks or intends to enroll. In addition, directory information may be disclosed without a student's consent unless the student has advised the registrar in writing that he/she wishes to restrict access to this information. "Directory Information" includes the student's name, address, telephone listing, e-mail address, date and place of birth, major field of study, participation in officially recognized activities and sports, dates of attendance, degrees and awards received and the most recent previous educational agency or institution attended by the student, as well as the weight and height of members of athletic teams.

- (4) The right to file a complaint with the U.S. Department of Education concerning the University's alleged failure to comply with FERPA. The name and address of the office that administers FERPA is Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202-4605.

Copies of the complete University policy statement regarding FERPA may be obtained from the Office of the Registrar.

Name Changes

The name carried on the permanent academic record is the name given on the application for admission and should be the complete legal name. The name will be changed by the Registrar upon request to reflect changes in marital status or legal name changes.

ACADEMIC PROBATION

University-wide regulations provide that students are placed on academic probation at the end of any term in which their UGA cumulative average is below 2.00. Students may remove themselves from academic probation by achieving a 2.0 UGA cumulative average. Transfer credits are not included in the computation of the UGA cumulative average.

Some schools and colleges within the University maintain academic standards specific to their degree requirements which may exceed University regulations. Students who fall below such standards should immediately contact the appropriate officer in their respective dean's office for academic counseling and program evaluation.



Admission to Another College or School While on Probation

A student on probation or on first dismissal in one college or school within the University may not transfer to another college or school without the consent of the dean of the college to which admission is sought.

ACADEMIC DISMISSAL

Students are subject to the retention standards listed below based upon the date of their initial enrollment at the University of Georgia.

I. Students whose first enrollment at the University occurred the summer quarter 1980, or thereafter, will be dismissed after two successive terms of probation (either semester or a combination of quarter and semester) if their UGA cumulative average is below that required for a designated number of total hours attempted as follows:

Total Semester Hours Attempted	Required MinimumUGA Cumulative Average
00-20	1.60
21-39	1.70
40-59	1.80
60-79	1.90
80 and above	2.00

II. Students whose first enrollment at the University occurred prior to the summer quarter 1980 and who have been enrolled at the University for a minimum of three quarters or two semesters will be dismissed if their UGA cumulative average is below that required for a designated number of total hours attempted, as follows:

Total Quarter Hours Attempted	Required MinimumUGA Cumulative Average
03-44	1.50
45-89	1.60
90-134	1.70
135-179	1.80
180-239	1.90
240 and above	2.00



III. Students who are required by the institution to enroll in Academic Assistance courses are allowed three attempts to complete a program area (English, math, reading, and counseling). Students who have not met the criteria for completion after three attempts will be placed on first academic dismissal from the University regardless of their total hours attempted and UGA cumulative average.

The following policies are used to determine a term of probation, a term of enrollment, total hours attempted, and minimum enrollment requirements:

1. A probationary term is the term of enrollment subsequent to the one in which the student's UGA cumulative average fell below 2.0. Grades earned in courses for which the student received transfer credit are not included in the computation of the UGA cumulative average.
2. Students will be considered enrolled for any term during which they receive a grade or grades other than W or V.
3. Total Hours Attempted include all hours attempted at the University plus all hours transferred to the University with the following exceptions:
 - a. Hours in courses with grades of I, W, V, NR, and ER are not counted.
 - b. Hours in courses that are numbered less than 1000 are not counted, e.g., Academic Assistance courses, Regents' Remediation courses.
4. Students will not be subject to dismissal if they meet the applicable retention standards listed above at the end of their most recent term of enrollment.
5. If students do not meet the applicable retention standards listed above at the end of their most recent term of attendance, they may be continued on probation provided they were enrolled for a minimum of 9 semester hours and earned a term average of 2.30 or higher. The following policies apply in the computation of the 9-hour minimum enrollment requirement:
 - a. These 9 hours must be in courses

numbered 1000 or above that are graded A-F exclusively.

- b. Courses in which grades of W, V, I, S, U, NR, or ER are received do not count toward the 9 hours.

First Dismissal

Students on first academic dismissal will be suspended from the University for a minimum of one semester, not to include the summer term. Students receiving a first dismissal at the end of a fall semester may apply for readmission for the following summer term, while students dismissed at the end of a spring or summer semester may not apply for readmission until the following spring semester. Readmission is granted at the discretion of the academic dean.

Second Dismissal

After a second academic dismissal, students will be suspended from the University for a minimum of one calendar year. At the end of the suspension, permission to return to the University can be granted only by appealing to the University Educational Affairs Committee.

WITHDRAWAL FROM THE UNIVERSITY

No student is permitted to withdraw after registration for a term without notifying the Office of Student Affairs, who shall notify the proper University officials. Veterans or their dependents receiving allowances under acts of Congress must notify the Veterans Education Benefits Office. Refunds will be based on the date of such notification.

A student against whom disciplinary charges are pending will not be permitted to withdraw from the University with a clear record until such charges shall have been resolved.

In general, a student voluntarily withdrawing may return later if scholastically eligible.

The College of Agricultural and Environmental Sciences



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Jerry A. Cherry, B.S., Ph.D., *Associate Dean for Research*
Josef M. Broder, B.S.A., M.S., Ph.D., *Assistant Dean*

General Information

PURPOSE

The goal of the College of Agricultural and Environmental Sciences instruction program is to educate students in the agricultural and environmental sciences to meet the needs of agriculture and environmental protection on a regional, national, and international level. Few of the graduates from the College enter farm production careers. More than half pursue careers in business, with both agricultural and non-agricultural firms. Other graduates are employed in government, environmental protection, education,

management, finance, research, processing, and manufacturing. The College of Agricultural and Environmental Sciences offers 23 degree programs that prepare students for a wide variety of career opportunities.

ORGANIZATION

The College of Agricultural and Environmental Sciences is organized to administer its three missions: teaching, research, and service. The Dean and Director has overall administrative responsibility. The Associate Dean for Academic Affairs administers the teaching program, the Associate Dean for Research administers the research program of the Agricultural Experiment Stations, and the Associate Dean for Extension administers the public service program of the Cooperative Extension Service. Most of the teaching faculty also have research responsibilities in the Agricultural Experiment Stations.

FACILITIES

Administrative offices for the College are located in Conner Hall on South Campus. All courses offered by the College are taught in buildings, laboratories, and greenhouses on South Campus. Several research farms, as well as plant and animal laboratories, are an integral part of the instruction program.

The Science Library and the University Computer Center are also conveniently located on South Campus. Many courses taught in various departments of the College require use of microcomputers and terminals which access University computers. Five microcomputer and word processing laboratories are located in College of Agricultural and Environmental Sciences classroom buildings for use by students and faculty.

Academic Information

ACADEMIC ADVISING

All undergraduate students in the College of Agricultural and Environmental Sciences are assigned an academic advisor by the head of the department in which the student will major. New students meet with advisors

during orientation sessions and permanent advisors are designated shortly after classes begin. Unspecified and pre-veterinary students will be assigned during new student orientation to an academic department in which they will be advised.

DEGREES OFFERED

The College of Agricultural and Environmental Sciences offers four undergraduate degrees: the Bachelor of Science in Agriculture (B.S.A.) with a specified major, the Bachelor of Science in Agricultural Engineering (B.S.A.E.), the Bachelor of Science in Biological Engineering (B.S.B.E.), and the Bachelor of Science in Environmental Health (B.S.E.H.).

The College of Agricultural and Environmental Sciences offers graduate programs leading to the Master of Science (M.S.) degree in agricultural economics, agricultural engineering, agronomy, animal science, dairy science, entomology, environmental health, food science, horticulture, plant pathology, and poultry science. Additional degrees offered by the college are the Master of Agricultural Economics (M.A.E.), the Master of Agricultural Extension (M.A.Ext.), and the Master of Plant Protection and Pest Management (M.P.P.P.M.).

The Ph.D. degree is offered in agricultural economics, agronomy, biological and agricultural engineering, entomology, food science, horticulture, plant pathology, and poultry science. In addition, there are interdisciplinary programs in animal nutrition and animal science (physiology, nutrition, and genetics), plant sciences, and toxicology.

CORE CURRICULUM

For an explanation and description of the University of Georgia Core Curriculum, see page 160 of this Bulletin.

MAJORS

The majors offered by the College and the requirements for each major may be found in the Programs of Study section of this Bulletin, starting on page 162.

ENVIRONMENTAL LITERACY

Prior to graduation, all undergraduate students entering the College of Agricultural and Environmental Sciences Fall Quarter 1993 or later must take one or more courses to promote their awareness of environmental issues.

HONORS PROGRAM

The College of Agricultural and Environmental Sciences participates in programs for superior students including the Honors Program. Admission of beginning freshmen is by invitation. Full-time students who are not invited as entering freshmen but who have a cumulative average of 3.6 or better and less than 45 hours may request admission to the program. Students transferring from other universities or colleges with a cumulative average of 3.6 should write directly to the director of the Honors Program and request an interview. Students interested in this program should consult the section "Honors Program" in this bulletin.

SCHOLARSHIPS

In addition to the financial assistance available to all University students, the College of Agricultural and Environmental Sciences provides scholarships, work-study programs and loans to students majoring in the agricultural sciences. For example, opportunity for part-time employment is often available in the College of Agricultural and Environmental Sciences through different academic departments. In addition, there are numerous agricultural scholarships awarded annually in national competitions. Students may apply for these awards through their academic advisors and department heads.

College of Agricultural and Environmental Sciences scholarships are divided into two categories; college-wide scholarships and departmental scholarships. The college-wide scholarships are open to any student in the College of Agricultural and Environmental Sciences. Recipients of the college-wide scholarships are selected by the

College of Agricultural and Environmental Sciences Scholarship Committee. Departmental scholarships are available to students enrolled in a specific department. Recipients of the departmental scholarships are selected by a committee within the departments.

To qualify for College of Agricultural and Environmental Sciences scholarships (both college-wide and departmental), a student must be officially enrolled or officially accepted for enrollment in the College of Agricultural and Environmental Sciences. Information and applications on all College of Agricultural and Environmental Sciences scholarships can be obtained by writing: Associate Dean for Academic Affairs, College of Agricultural and Environmental Sciences, 102 Conner Hall, University of Georgia, Athens, GA 30602-7502.

Courses of Instruction

See page 303. Courses for the College of Agricultural and Environmental Sciences are listed under the following prefixes:

AAEC	Agricultural and Applied Economics
ADSC	Animal and Dairy Science
AGCM	Agricultural Communications
AGRI	Agriculture
CRSS	Crop and Soil Sciences
EHSC	Environmental Health Science
ENGR	Engineering
ENTO	Entomology
ETEC	Engineering Technology
FDST	Food Science and Technology
HORT	Horticulture
PATH	Plant Pathology
PGEN	Plant Genetics
POUL	Poultry Science

The Franklin College of Arts and Sciences



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Marci M. Babineau, *Computer Systems Manager*

Bobbie Epting, *Director of Development*

R. Alan Langford, M.D., *Chief Health Professions
Advisor*

General Information

PURPOSE

The objectives of the faculty of the Franklin College are to advance and disseminate knowledge in the basic academic disciplines of the Arts and Sciences. The college offers its undergraduates both the fundamentals of

a liberal education on which to base a lifetime of learning and the opportunity to concentrate in studies which form the foundation for professional pursuits. In concert with the Graduate School, the Franklin College offers graduate students opportunities for advanced study and research. The faculty strives to enrich the intellect and nurture the resourcefulness of the individual student so that he or she may deal with life's challenges with well-founded self-confidence and self-assurance. The objectives of the Franklin College are pursued by a faculty committed to high achievement in teaching and research and creative activities and confident in the quality and the vitality of our educational program.

ORGANIZATION

The Franklin College is organized into several divisions.

The Division of General Studies

All freshmen entering the College, and all transfer students who have not earned

enough credit to be classified as juniors, are enrolled in this division. While in the Division of General Studies, students take courses in the required University of Georgia Core Curriculum and also work toward satisfying the Franklin College degree requirements, identified below. While in this Division, students who entered the University undecided about their majors must choose majors for which they are eligible.

Upon the satisfactory completion of the requirements of this division, which is usually accomplished during the first two years, students transfer either to one of the several departments of the College or to another school or college within the University. Each department in the Franklin College, and each school or college in the University, has its own regulations concerning transfer. Students should contact the appropriate dean's office well in advance of the expected date of transfer.

The Major Divisions

The major divisions in the Franklin College are:

Division of Biological Sciences: The Departments of Biochemistry and Molecular Biology, Botany, Cellular Biology, Genetics, Marine Sciences, Microbiology, Psychology, and the Institute of Ecology.

Division of Fine Arts: The Department of Drama, and the Schools of Art and Music.

Division of Humanities: The Departments of Classics, Comparative Literature, English, Germanic and Slavic Languages, Romance Languages, Speech Communication, History, Philosophy, and Religion.

Division of Social Sciences: The Departments of Anthropology, Geography, History, Philosophy, Political Science, Psychology, Sociology, and Speech Communication.

Division of Physical Sciences: The Departments of Chemistry, Computer Science, Geography, Geology, Marine Sciences, Mathematics, Physics and Astronomy, Statistics, and the Institute of Ecology.

Division of Interdisciplinary Studies: The African American Studies Program, French Studies Program, German Studies

Program, Global Policy Studies Program, Latin American and Caribbean Studies Program, Linguistics Program, Medieval Studies Program, Women's Studies Program, Criminal Justice Studies Program, and Interdisciplinary Studies Major Program.

Minimum requirements for entry to a major division are at least 60 semester hours of college credit and a cumulative grade point average of 2.0. Some majors have additional (more stringent) requirements. Once admitted to a major division in the College, a student may transfer to any other division and/or degree program in the Franklin College by satisfying the requirements of that program, and completing the Change of Major form in the Dean's Office.

Academic Information

ADVANCED PLACEMENT

Through Advanced Placement, a student may exempt a course with or without credit. Exemption of a course with credit is equivalent to completing the course. This credit counts toward the 120 semester hours required for graduation and may be used to satisfy core curriculum requirements. If a course is exempted without credit, a core curriculum requirement may be met. If so, the student has the opportunity to choose an equivalent number of credit hours in electives in order to meet overall graduation requirements. For further information concerning Advanced Placement, inquire at the Honors Office in the Academic Building.

APPLICATION FOR GRADUATION

The Registrar's Office produces graduation checksheets for currently enrolled students who have completed 105 semester hours toward their degrees. Each student is responsible for contacting the Graduation Certification Office (542-1522) to complete degree certification. Failure to do so may result in postponement of graduation.

ACADEMIC ADVISING

Academic advising is mandatory in the Franklin College of Arts and Sciences and is

provided by a combination of professional advisors and faculty members. While in the General Studies Division, most students will be advised in New College by professional advisors. Students sign up for appointments in person in New College.

Once students have been admitted to major divisions, they should go to their major departments for assignment of faculty advisors. Students with general questions or problems concerning academic matters are encouraged to contact the Coordinator of Academic Advising in the Dean's Office, 106 New College.

HONORS PROGRAM

Appropriate Honors courses may substitute for corresponding courses in the curriculum of the College of Arts and Sciences. Contact the Honors Program Office for information.

Degrees and Programs Offered

The Franklin College offers several baccalaureate degrees and participates in several combined degree programs. Each of these degrees requires a liberal education in the division of general studies and a major in one of the major divisions. In addition, several certificate programs allow students to combine a major in one discipline with interdisciplinary work in others.

The following degrees are offered by the College of Arts and Sciences:

Bachelor of Arts, in which the major may be in any major or division of the College, in Economics, in the Honors Interdisciplinary Studies Program, or the Interdisciplinary Studies Major of the Division of Interdisciplinary Studies.

Bachelor of Science, in which the major must be in the Divisions of Biological or Physical Sciences, in the Honors Interdisciplinary Studies Program, or the Interdisciplinary Studies Major of the Division of Interdisciplinary Studies.

Bachelor of Science in Chemistry, in which the major must be Chemistry.

Bachelor of Fine Arts, in which the major must be in the Division of Fine Arts or the

Interdisciplinary Major of the Division of Interdisciplinary Studies.

Bachelor of Music, in which the major must be in Music.

Joint Degree Programs. For students of superior scholastic standing, the Franklin College offers programs leading to a baccalaureate degree from the College combined with a professional degree or program from another school or college. They are:

Bachelor of Science, offered with the Medical College of Georgia.

Bachelor of Science, offered with the College of Veterinary Medicine at the University.

Combined Bachelor-Master Degree, offered with the Graduate School at the University.

Also, there are several programs which may be combined with majors in other areas: Institute for African American Studies, French Studies Program, German Studies Program, Global Policy Studies Program, Latin American and Caribbean Studies Program, Medieval Studies Program, Women's Studies Program, the Pre-Theology program and the A.B. or B.S. with provision for a teaching certificate. Each of these degrees and programs is described in the Programs of Study section of this Bulletin.

Double Major. A double major is two separate majors in the same degree. A double major is earned when the requirements for a major in each of the two areas are satisfied and the requirements for the degree are satisfied. It is sometimes possible to count the same course twice, once in each major, in satisfying the major requirements. When two separate degrees are earned, this is called a *dual degree*. See the Academic Information section of this Bulletin for regulations.

Minor. Many departments and programs offer the chance to earn a minor by taking 15-18 semester hours of approved courses. Contact the individual department or program for information.

CORE CURRICULUM

For a description and explanation of the University of Georgia Core Curriculum, see page 160 of this Bulletin.

DEGREE REQUIREMENTS

Requirements for the degrees and majors offered by the Franklin College may be found in the Programs of Study section of this Bulletin, starting on page 162.

UNIVERSITY OF GEORGIA GRADUATION REQUIREMENTS

For a description and explanation of University-wide requirements for graduation, see Degree Requirements in the Academic Information section of this Bulletin.

ADDITIONAL REQUIREMENTS FOR DEGREES IN THE FRANKLIN COLLEGE

1. All degree recipients must have satisfactorily completed one course certified by the College as dealing with multicultural subject matter.
2. All A.B. and B.S. degree recipients must demonstrate competency in a foreign language equivalent to completion of the third semester of study at the University of Georgia. This requirement may be met by satisfactory scores on a language placement test (including AP, SAT II, UGA placement tests, or the TOEFL if English is not the student's native language) or satisfactory completion of a third semester course at an accredited college or university.
3. All A.B. and B.S. degree recipients must have satisfactorily completed a minimum of one college course in literature; one college course in history; two college courses in social science (not including history); and two college courses dealing with the disciplines of fine and performing arts, philosophy, or religion.
4. All A.B. and B.S. degree recipients must have satisfactorily completed one course in the biological sciences and one course in the physical sciences.

WAIVER OF DEGREE REQUIREMENTS

Course substitutions or waiver of requirements may be made only upon written approval of the Dean or the Senate Committee on Academic Standards of the College of Arts and Sciences. In some cases, specific courses listed in the degree requirements may be replaced by higher level courses. Consult with an advisor for particulars.

Other Degree Programs

BACHELOR OF ARTS OR BACHELOR OF SCIENCE (With Provisions for a Professional Secondary School Teaching Certificate)

Either degree requires that some courses be taken in both the College of Education and the Franklin College of Arts and Sciences. Students interested in meeting teacher certification requirements should inquire at both the Student Services Center, College of Education, and in the Franklin College of Arts and Sciences to determine their appropriate advisors. Each student's program must then have the approval of both advisors and the dean's office of each college.

COMBINED BACHELOR/MASTER DEGREE

Certain exceptional students entering the University each year with unusual academic achievements may have potential to plan a curriculum leading directly to a master's degree during the four-year period normally used to complete the baccalaureate. This combined bachelor/master degree objective is perhaps the greatest academic challenge offered by the University.

A student interested in this degree objective submits credentials for evaluation to the Honors Program. Candidates should have obtained at least 15 semester credits (English, foreign languages, mathematics, history, political science, biology, chemistry, and others) through the Advanced Placement Program. Each candidate should:

- be ready to begin sophomore studies during the first year here;
- have balanced Scholastic Aptitude Test (SAT) scores totaling 1300 or above;
- come with a general inclination for a major;
- exhibit motivation;
- provide supporting credentials that indicate other superior academic achievements.

Courses of Instruction

Courses for the College of Arts and Sciences are listed under the following prefixes:

AFAM	African American Studies
ANTH	Anthropology
ARAB	Arabic
ARED	Art Education
ARGD	Graphic Design
ARHI	Art History
ARID	Interior Design
ARST	Studio Art
ARTI	Artificial Intelligence
ASTR	Astronomy
ARTS	Art
BCMB	Biochemistry and Molecular Biology
BIOL	Biology
BTNY	Botany
CBIO	Cellular Biology
CHEM	Chemistry
CHNS	Chinese
CLAS	Classical Culture
CMLT	Comparative Literature
CSCI	Computer Science
DRAM	Drama
ECOL	Ecology
EETH	Environmental Ethics
ENGL	English
FREN	French
FRES	Freshman Seminars
GENE	Genetics
GEOG	Geography
GEOL	Geology
GREK	Greek
GRMN	German
HEBR	Hebrew
HIST	History
HONS	Honors

INTS	Interdisciplinary Studies
ITAL	Italian
JPNS	Japanese
KREN	Korean
LATN	Latin
LING	Linguistics
MARS	Marine Sciences
MATH	Mathematics
MIBO	Microbiology
MUSI	Music
PHIL	Philosophy
PHYS	Physics
POLS	Political Science
PORT	Portuguese
PSYC	Psychology
RELI	Religion
ROML	Romance Languages
RUSS	Russian
RUST	Russian Translation
SOCI	Sociology
SOSI	Social Science
SPAN	Spanish
SPCM	Speech Communication
STAT	Statistics
SWAH	Swahili
SWED	Swedish
WMST	Women's Studies
YORB	Yoruba

The C. Herman and Mary Virginia Terry College of Business & THE J.M. TULL SCHOOL OF ACCOUNTING



R. Preston Brooks Hall, (706) 542-3545
FAX: (706) 542-7196
Homepage URL: <http://www.cba.uga.edu>

Administrative Officers

J. Don Edwards, B.S., M.B.S., Ph.D., C.P.A.,
D.H.C., *Professor and Interim Dean*
James S. Trieschmann, B.S., B.A., M.B.A., D.B.A.,
Associate Dean
Kay L. Keck, B.S., M.B.A., Ph.D., *Director of
Graduate Programs*
Elizabeth A. Barth, B.A., M.A., Ed.D., *Director of
Undergraduate Programs*
F. George Marable, B.B.A., *Business Manager*

General Information

PURPOSE

The Terry College of Business intends not only to teach undergraduate and graduate students, but also to conduct a broad program of basic and applied research and to render extensive service to society. The particular task is one of educating persons for the practice of business administration.

Although students may be admitted to the Terry College of Business as freshmen or sophomores, the attainment of a broad education requires students to concentrate much of their first two years in liberal arts courses. The major portion of the remaining two years is focused on a common body of knowledge in business administration. In addition, students are required to concentrate on an area of specialized study.

ACCREDITATION

The Terry College of Business is a member of the American Assembly of Collegiate Schools of Business, the recognized national accrediting association for collegiate schools of business.

FACILITIES

The administrative offices are located in the five-story R. Preston Brooks Hall on the north campus. The majority of business courses are taught in Caldwell Hall, a seven-story classroom building adjacent to

Brooks Hall. Sanford Hall, a state-of-the-art facility opened in 1997, provides additional classrooms, a student center, and the office of the Undergraduate Program. Detailed information about the Terry College, undergraduate and graduate programs, faculty, departments, and research centers can be accessed at <http://www.cba.uga.edu>.

Academic Information

ACADEMIC ADVISING

Academic advisement in the College is coordinated by the Director of the Undergraduate Program. Freshmen and sophomores are advised in the Lower Division Advising Center. International Business students, Accounting students, Honors Program students, and upper division students are advised in their respective departments. Each major department has a coordinator of advisors who is responsible for supervising academic advising.

HONORS PROGRAM

In September 1963 the faculty of the Terry College of Business established an honors program, which is now coordinated with the University's Honors Program. Admission of students to the Honors Program is by invitation only. Beginning freshmen are admitted on the basis of high school grades and scores on the College Entrance Examination Board Scholastic Aptitude Tests, and on the basis of placement and qualifying examinations administered by the University. For all other students, grades made at the University determine admission to the program.

DEGREES OFFERED

The Terry College of Business offers the undergraduate degree, Bachelor of Business Administration. The School of Accounting offers a five-year course of study leading to a B.B.A./M.Acc. degree.

Several graduate degree programs in business are described in the *Graduate School Bulletin*, including the Master of

Business Administration, Master of Accountancy, Master of Marketing Research, and the Master of Arts and Doctor of Philosophy degrees in business-related fields. Also offered are joint degree programs in Master of Business Administration-Law and Master of Accountancy-Law. Information on any of these graduate degree programs may be obtained by writing the Director of Graduate Programs within the Terry College of Business. Visit our home page on the World Wide Web at <http://www.cba.uga.edu>.

ENTRANCE REQUIREMENTS

Entrance requirements for incoming freshmen, transfer students, and students declaring majors within the University of Georgia may be higher in selected BBA majors. Please check with the Office of Admissions (706-542-8776) if you are an incoming freshman, or with the Terry College of Business, Office of Undergraduate Programs (706-542-8352), if you are a transfer student.

MAJORS

Major fields of study include: accounting, economics, finance, general business, international business, location analysis, management, management information systems, marketing, real estate, and risk management and insurance. See the Programs of Study section of this Bulletin for requirements for these majors.

INTERNSHIPS

Junior and senior students may choose to gain experience by serving internships. Within departmental guidelines, students may receive academic credit for internships.

STUDY ABROAD

Students considering a Study Abroad Program should check with their academic advisor for information about specific courses and programs. Students should work through the UGA Study Abroad Program to insure that academic credit is transferrable and applicable to the BBA

degree. Several Study Abroad and Exchange Programs are coordinated through the International Business Program in the Terry College.

Bachelor of Business Administration Degree Requirements

All students should acquaint themselves with degree requirements applicable to all students of the University as set forth in the general Academic Information section of this bulletin.

In order to qualify for a Bachelor of Business Administration degree, a student must meet the entrance requirements which may vary from other schools and colleges within the University, be enrolled in one of the major disciplines, and meet all of the degree requirements as set forth by the Terry College of Business.

RESIDENCY

In addition to the UGA residence policy, the Terry College of Business has the following residency requirement: BBA students must complete at least 30 semester hours as a student in the Terry College. Students are also expected to complete major courses in residence. However in some cases with departmental permission, a student may receive transfer credit for one major course.

GRADES

Grades or GPAs of 2.0 in the following areas are required for BBA degree certification:

- 1) ENGL 1101 and 1102 combined. Students will not receive credit for courses numbered 3000 and above until they have satisfactorily completed ENG 1101 and 1102.
- 2) All major courses;
- 3) Business cumulative GPA; and
- 4) UGA cumulative GPA.

TRANSFER STUDENTS

Admission standards for transfer students to a major in the Terry College of Business

may vary from those standards set by other schools and colleges within the University. Acceptance to the Terry College of Business is contingent upon the student's currently submitted transcript and transfer GPA.

The specific credit for work done at other institutions which will apply toward the Bachelor of Business Administration degree is determined by UGA Admissions Transfer Credit Evaluators. Establishing a transfer transcript does not necessarily mean that all transfer credit will be accepted toward a Bachelor of Business Administration degree.

Transfer students attend transfer orientation sessions. During orientation, students review their progress toward the B.B.A. degree with a Terry College of Business advisor. Advisors help students with course selection prior to registration.

Regulations governing transfer students are given in the Academic Information section of this Bulletin.

ACADEMIC HOURS REQUIRED FOR THE BBA DEGREE

60 hours: University System Core Curriculum, Areas A - F

24 hours: General electives (as specified in the BBA Check sheet)

12 hours: Upper division business core (3000-series courses)

3 hours: Upper division business selection (4000-series courses)

21 hours: Major required courses

120 hours, plus one hour of Physical Education.

UNIVERSITY OF GEORGIA DEGREE REQUIREMENTS

For a complete description and explanation of University-wide requirements for graduation, see Degree Requirements under Academic Information in this Bulletin.

CORE CURRICULUM

See page 160 of this Bulletin for a detailed explanation and description of the Core Curriculum. Preferred courses for Areas A-

F are indicated under the specific BBA majors in the Programs of Study section of this Bulletin.

MAJOR AND ADDITIONAL BBA REQUIREMENTS

General Electives (eight courses--24 hours)

15 hours in Arts and Sciences

1 business course outside major (upper division)

2 business courses outside department (upper division)

Upper Division Business Core (four courses--12 hours)

All business students take the following four courses and their current prerequisites:

MGMT 3000 Management of Organizations and Individuals--Prerequisites: MGMT 2090, 2090L and ACCT 2101, 2101L

MSIT 3000 Statistical Analysis for Business--Prerequisites: MATH 2200-2200L, MGMT 2090, 2090L and ACCT 2101, 2101L

FINA 3000 Financial Management--Prerequisite: MSIT 3000

MARK 3000 Principles of Marketing--Prerequisite: MSIT 3000

Upper Division Business Selection (one course--3 hours)

MSIT 3000 and ACCT 2101, 2101L are prerequisites for the following Terry College of Business courses. (If the course selected is in student's major, a second 4000 course should be used on Line "b" of General Electives as indicated on the BBA checksheet.)

ACCT 4000 Accounting Information in a Multinational Setting

FINA 4000 Money and Capital Markets

ECON 4010 Intermediate Microeconomics

MARK 4000 Marketing Research for Business Decision

MGMT 4000 Integrated Resource Management

REAL 4000 Real Estate

RMIN 4000 Risk Management and Insurance

Major Required Courses (7 courses--21 hours)

Each student will take seven designated 3-hour courses in a given major. Major courses in the 4000-5000 series are restricted to Terry College of Business students (or permission of College) and have required prerequisites of MSIT 3000 and ACCT 2102.

Courses of Instruction

See page 303. Courses for the Terry College of Business are listed under the following prefixes:

ACCT	Accounting
ECON	Economics
FINA	Banking and Finance
INTB	International Business
LEGL	Legal Studies
MARK	Marketing
MSIT	Management Sciences and Information Technology
MGMT	Management
REAL	Real Estate
RMIN	Risk Management and Insurance

The College of Education



Aderhold Hall, (706) 542-1151

Fax: (706) 542-0360

Homepage URL: <http://www.coe.uga.edu/>

Administrative Officers

Russell H. Yeany, B.S., M.Ed., Ph.D., *Dean*

Sylvia M. Hutchinson, B.S.Ed., M.Ed., Ph.D., *Associate Dean of Education*

General Information

PURPOSE

The College of Education is the division of the University of Georgia that provides and administers all professional programs and courses designed for the preparation of teachers and other professional education positions. In its role of educational leadership, the College recruits and selects prospective educational professionals, provides pre-service and in-service training, conducts research to solve educational problems, and offers field service to all types and levels of educational institutions.

ORGANIZATION OF UNDERGRADUATE PROGRAMS

Undergraduate programs in the College of Education prepare students to teach in the following fields:

Early Childhood (preschool, kindergarten, grades 1-5)

Middle School (grades 4-8)

Secondary (grades 7-12) in agricultural education, business education, health occupations education, home economics, marketing education, technology education, trade and industrial education, and the areas of English, mathematics, science, and social science.

Grades P-12 in art, dance, foreign language education, health promotion and education, music, physical education, and special education.

Programs leading to certification as a counselor, school administrator, etc., are all graduate or postbaccalaureate programs.

The College administers all programs in professional education. The entire re-

sources of the University are used in the education of teachers. Some programs such as Agriculture Education, Art Education, Home Economics Education, and Music Education are primarily housed outside the College of Education and many courses in other teacher education programs are taught by other divisions of the University.

Although specific course requirements vary with the teaching field, each undergraduate program includes the following elements:

- (1) general education, a sequence of courses from a variety of fields, taken primarily in the College of Arts and Sciences in the freshman and sophomore years;
- (2) the teaching field or major, consisting of courses designed for the specific subject or grade level of prospective teaching, offered in the College of Agricultural and Environmental Sciences, College of Arts and Sciences, College of Business Administration, College of Education, and College of Family and Consumer Sciences;
- (3) work in professional education in the College of Education.

Non-teaching majors are also offered in communication sciences and disorders, dance, exercise and sport science, health promotion and education, and recreation and leisure studies.

FACILITIES

The College of Education utilizes extensively the facilities of the University, the community, and the schools in the area. Administrative offices are located in Aderhold Hall. In addition, the following buildings are primarily used for College of Education programs: Physical Education Building, River's Crossing, and Ramsey Student Center.

ACCREDITATION

The University is accredited by the Georgia Professional Standards Commission, the Southern Association of Colleges and Schools, and the National Council for the Accreditation of Teacher Education. Specific programs are also accredited by the

American Speech-Language-Hearing Association, National Recreation and Parks Association in cooperation with the American Association for Leisure Recreation, and the American Psychological Association.

ACADEMIC ADVISING

The Associate Dean's Office of the College provides initial advisement for freshmen, transfer students and for those who have not yet made a decision about a specific teaching field or level. Following this initial advisement period, students are assigned to an advisor in their teaching field. Students should consult an advisor in their teaching field as early as possible in their program and should confer with their advisor each semester to plan programs and preregister.

Students who need initial advisement should contact the Associate Dean's Office, G-10 Aderhold Hall.

Special Programs

HONORS PROGRAM

Students in the College of Education are encouraged to participate in the Honors Program. Admission of beginning students is by invitation. Enrolled students with a cumulative grade point average of 3.0 or higher may apply for admission to the program. The College of Education offers individual study and Honors thesis courses and an Honors section of Learning and Motivation (EPSY 2020H) and Child and Adolescent Development (EPSY 3010H). See the Honors Programs section of this Bulletin for more information about this program.

EDUCATIONAL FIELD EXPERIENCES (Student Teaching and Practicums)

Supervised observation-participation in cooperating schools is required of most candidates for a degree leading to professional certification. The extent of required participation in pre-student teaching laboratory experiences varies extensively among different teacher preparation programs. A

minimum of one full semester of student teaching is required of all teaching candidates.

Placement in student teaching requires admission to Teacher Education and other prerequisites as outlined under the Admission to Teacher Education section. Student teaching activities are directed by college supervisors and selected cooperating supervising teachers. High school student teachers usually teach in one teaching field, middle grades in one or two teaching fields, and early childhood at a kindergarten or primary level.

Student teaching involves full-time placement in a school setting. It normally carries 12 hours credit; no additional course work is permitted during student teaching. Students should anticipate that additional expenses will be incurred during student teaching as placement may require transportation and off-campus living arrangements.

Students in some programs participate in a school practicum prior to student teaching. Students should see their departmental advisors concerning this requirement.

Practicums are required for non-teacher education programs which include exercise and sport science, health promotion and education, recreation and leisure studies, and dance education.

Clinics and Laboratories

READING CLINIC

The Reading Clinic provides assessment and instruction of school-aged children with reading difficulties. These services are provided both as a service to the state of Georgia and to provide useful experiences for our graduate students. The Clinic provides direct tutoring for children with reading problems. This tutoring is done individually or in small groups and is based on an analysis of the child's needs in reading. The Clinic also will evaluate children for the purpose of making suggestions for more effective reading instruction. These evaluations are followed up with a conference with school personnel to implement these suggestions. Arrangements for

these services should be made through the Director of the Clinic.

SPECIAL EDUCATION CLINIC

The Learning Disabilities Clinic functions as a service facility for the community and training facility for prospective teachers who are developing their assessment skills. The Adult Clinic provides in-depth diagnostic evaluations and intervention services to individuals over the age of 18 who think the learning, vocational, or social difficulties may be due to learning disabilities. Arrangements may be made through the clinic's intake coordinator.

SPEECH AND HEARING CLINIC

The communication sciences and disorders area is concerned with training of speech language pathologists, audiologists, and teachers of the hearing impaired, and the conducting of research in speech, language and hearing disorders. The Speech and Hearing Clinic extends its diagnostic and treatment services to all children and adults who have functional or organic problems of oral communication. Particular attention is given to assisting University students. Arrangements for these services can be made by contacting the Clinic office at (706) 542-4598.

STUDENT DEVELOPMENT LABORATORY

The Student Development Laboratory provides counseling and other developmental personal growth experiences for all college-age students. Experiences include academic success training (study skills), human relations skill building, dealing with test anxiety, leadership training, improving creative thinking, asserting oneself positively, and personal decision-making skill building. In addition, individual and group counseling opportunities are available. The program is coordinated and implemented by faculty and advanced graduate students in the Department of Counseling and Human Development Services. The Student Development Laboratory is located in 420 Aderhold Hall, (706) 542-4140.

Academic Information

DEGREES OFFERED

The College of Education prepares its students for the undergraduate degree of Bachelor of Science in Education (B.S.Ed.). By coordinating programs with other appropriate colleges and schools, the College also prepares students for educational specialties within the undergraduate degrees of Bachelor of Science in Agriculture, Bachelor of Fine Arts, Bachelor of Science in Family and Consumer Sciences, and Bachelor of Music.

Through the Graduate School of the University, the following degrees are offered: Master of Education, Master of Arts in Education, Master of Music Education, Educational Specialist, Doctor of Education, and Doctor of Philosophy. See the *Graduate School Bulletin* for further information.

MATRICULATION

Most students who prepare for teaching matriculate in the College of Education and pursue one of the programs leading to the degree of Bachelor of Science in Education. Students matriculate in other colleges for specialized degrees with educational applications.

Students enrolled in other colleges of the University who seek certification as teachers should apply for admission to Teacher Education, have their individual programs approved by the College of Education by the beginning of the junior year, and must meet all requirements of the approved professional programs.

A distinction is made between matriculation in a division of the University or the College of Education offering teacher education programs and formal admission to a program in teacher education, as described in "Admission to the College and to Teacher Education."

ADMISSION TO THE COLLEGE AND TO TEACHER EDUCATION

Standards for admission of freshmen to the College of Education are the same as for

those admitted to the University. Admission standards for transfer students to the College of Education may vary from those standards set by other schools and colleges within the University and may also vary according to the number of hours earned.

Enrollment in the College of Education does not constitute admission as a candidate for a degree in teacher education or professional certification in other professional fields. Each student who seeks a professional teaching degree or professional teacher certification must apply for admission to Teacher Education through the College's Educational Field Experience Office, 315 Aderhold Hall.

For admission of transfer students to the College of Education, the following grade point averages (GPAs) will apply: All external transfer students must have a minimum overall GPA of at least a 2.3 for acceptance to the College. All internal transfer students (transfers from within the University) must meet the following minimum requirements: for up to 30 semester hours, 2.0; from 31 to 60 semester hours, 2.1; from 61 to 90 semester hours, 2.2; and for 91 or more semester hours, a 2.3 GPA.

Many of the majors in the College of Education require higher GPAs than these minimum requirements listed. Students should check with individual departments to determine the actual requirements for entry into their program.

In determining the GPA for admission, an overall grade point average will be used for transfer students from other institutions, while a cumulative grade point average will be used for University of Georgia students.

Admission to Teacher Education must be obtained prior to enrollment in professional teacher education courses designated (TE). Requirements for admission to undergraduate Teacher Education include: completion of at least one semester of academic work at the University of Georgia, 2.5 overall grade point average, with the exception of majors in occupational studies which require a 2.5 cumulative grade point average; satisfactory completion of English 1101 and 1102; satisfactory completion of EFND 2030 or the equivalent course taken at

another institution; passing of the Regents' Test; demonstration of oral language competency; and departmental recommendation.

In addition, please note the B.S.Ed. degree requirements below.

Courses that are designated as Teacher Education (TE) require admission to a teacher education program before they can be taken. *Some programs have GPA requirements exceeding these.* Language proficiency and the 2.5 GPA (or higher program requirements) must be maintained throughout the programs. If a student already holds a degree, admission to teacher education is based on the *overall* GPA.

To receive a student teaching assignment a student must:

- make application at the Educational Field Experience Office, 315 Aderhold, by the end of the first week of the semester preceding student teaching;
- be admitted to Teacher Education; have at least a 2.5 overall grade point average, with the exception of majors in occupational studies which require a 2.5 cumulative grade point average;
- have completed essentially all required courses in the teaching field with a grade of at least C in each;
- have completed the prerequisite education courses with a grade of at least C in each (courses in curriculum and teaching procedures must have been taken on this campus);
- have successfully completed the school practicum (required in most programs);
- be in satisfactory personal health to assume responsibility in student teaching; and
- be recommended by his/her department.

A student is not permitted to student teach while on probation.

Some program areas have requirements exceeding the above; such requirements must be met to enter the program and for continued matriculation, including student teaching.

CERTIFICATION

Initial teacher certification in Georgia may be obtained only by following an approved teacher education program. Requirements

for meeting an approved teacher education program vary depending on area of certification. For specific course requirements relative to an area of interest, students should contact the appropriate department within the College of Education. The department will determine the requirements for entry into the program, the course work required to meet the approved teacher education program, and the procedures for obtaining a professional recommendation.

The Georgia Professional Standards Commission provides evaluations only to determine or establish one's eligibility for a provisional certificate, to determine requirements needed to add a field, and to determine renewal requirements for previously held Georgia certificates. The Commission will no longer outline specific professional education course work requirements to establish the initial professional certificate (except for the level one and two Vocational Education certificate fields).

In addition to completing prescribed academic work, individuals applying for initial teacher certification beginning March 1, 1999, must present passing scores on Praxis I academic skills test in reading, mathematics, and writing. Individuals are exempt from this requirement if they have earned qualifying scores on any of these tests: SAT total score 1000 (with at least 480V and 520M); GRE total score 1030 (with at least 490V and 540Q); or ACT total score 22 (with at least 21V and 22M). An applicant must also earn satisfactory scores on the Praxis II (Subject Assessments) in the appropriate subject areas before an application can be submitted. Applications for evaluation, professional certificates, and Praxis I and II registration packets and study guides are available from the Associate Dean's Office, G-10 Aderhold Hall.

Bachelor of Science in Education Degree Requirements

Students are required to acquaint themselves with general degree requirements applicable to all students of the University

as stated in the Academic Information section of this Bulletin.

Undergraduate teacher education programs are approved by the Georgia Professional Standards Commission and the National Council for the Accreditation of Teacher Education. A person completing any one of these programs may be recommended for certification in Georgia as well as in most other states.

The programs outlined in the Programs of Study section of this Bulletin lead to a Bachelor of Science in Education degree except in agriculture education, art education, home economics education, and music education. For these fields, students who wish to complete a certification program must meet the professional education requirements cited under "Admission to the College and to Teacher Education" and complete required professional teacher education courses. They must also meet the degree requirements for these majors.

The B.S.Ed. programs typically include 120 semester hours. Credit beyond one semester hour of Basic Physical Education (PEDB 1010-1990) may not be applied toward the 120-hour minimum requirement. In the requirements of each particular program, *please note that Teacher Education (TE) courses require admission to Teacher Education prior to enrollment.*

CORE CURRICULUM

For general information on the University of Georgia Core Curriculum, see page 160 of this Bulletin.

HOURS AND RESIDENCY

A minimum of 120 semester hours is required for a Bachelor of Science in Education degree. A minimum of 40 of the last 60 semester hours must be taken in residence at the University.

GRADES

A candidate for the Bachelor of Science in Education degree or other baccalaureate degree leading to teacher certification must obtain a grade of C or higher in the prescribed education field courses.

CANDIDACY FOR A DEGREE

When a student has earned at least 90 semester hours, a graduation checksheet will automatically be generated by the Office of the Registrar for processing. For graduation information, contact the Associate Dean's Office, G-10 Aderhold Hall.

Courses of Instruction

Courses for the College of Education are listed under the following prefixes:

CMSD	Communication Sciences and Disorders
DANC	Dance Education
EAGR	Agricultural Education
EBUS	Business Education
ECHD	Counseling and Human Development Services
EDEC	Early Childhood Education
EDIT	Instructional Technology
EDEL	Elementary Education
EDMS	Middle School Education
EDUC	Education
EFND	Foundations of Education
EHEC	Home Economics Education
ELAN	Language Education
EMAT	Mathematics Education
EMKT	Marketing Education
EMUS	Music Education
EOCS	Occupational Studies
ERSH	Educational Research and Measurement
ESCI	Science Education
ESOC	Social Science Education
ETES	Technological Studies
EXRS	Exercise Science
HPRB	Health Promotion and Behavior
PEDB	Physical Education Basic
PEDS	Physical Education and Sport Studies
READ	Reading Education
RLST	Recreation and Leisure Studies
SPED	Special Education

The School of Environmental Design



Caldwell Hall, (706) 542-1816
FAX: (706) 542-4236
Homepage URL: <http://www.sed.uga.edu/>
Email: www@sed.uga.edu

Administrative Officer

John F. Crowley, B.A., M.A., Ph.D., *Dean*

General Information

PURPOSE

The School of Environmental Design is a center for providing education for those students who wish to play a role in the planning, design, and management of the outdoor environment. The undergraduate program provides professional instruction in landscape architecture.

The discipline of landscape architecture is both an art and a science, and includes the creation and management of environments which meet human needs and are ecologically sensitive. Whether practicing in urban settings or natural environments, the landscape architect's tools blend horticultural,

engineering, and artistic skills with an understanding of natural processes and a sense of stewardship.

Special Programs

INTERNSHIP

Under the Internship Program, qualified students are given the opportunity to gain experience by working in a professional office under the supervision of a registered landscape architect or related practitioner (architects, engineers, or planners).

The internship requirements are as follows:

- (1) Internships must be approved in advance by the internship coordinator.
- (2) To be eligible to serve in an internship for credit, students must have junior standing or special permission.
- (3) Students are required to take a minimum of 8 credit hours of internship before graduation.
- (4) Students who participate in internships must pre-register and pay tuition for

LAND 4700 during the semester in which the internship is being taken.

- (5) Students must submit written reports on their internships.
- (6) Evaluations are made by the employers at the end of the internships.
- (7) Credit for the course will be given after the written reports and employers' evaluations on work activities have been presented.

A grade of S (satisfactory) or U (unsatisfactory) will be given for each three hours of credit.

FIELD TRIPS

Supervised field trips are required of all students in connection with their classes. Students travel at their own expense to designated places of landscape interest in Georgia and adjoining states, accompanied by a member of the teaching staff.

STUDIES ABROAD

Selected students are permitted to enroll in a studies abroad program and may receive credit towards their degree. In conjunction with the School of Art, the School provides a studio program in Italy offering up to six credit hours of instruction in landscape architecture and two credit hours of instruction in art history.

There are also a limited number of spaces in exchange programs in Australia and England. See your advisor for details.

Degrees Offered

The studies offered in landscape architecture at the University of Georgia are built around a curriculum designed to prepare students for professional practice or graduate education. The program leads to the Bachelor of Landscape Architecture degree. This five-year professional program is accredited by the National Commission on Accrediting and the American Society of Landscape Architects. A Master of Landscape Architecture degree and a Master of Historic Preservation degree are offered through the Graduate School of the

University. Only a limited number of positions are available in the School and early application is advised. The best qualified students are selected from the pool of applicants.

LANDSCAPE ARCHITECTURE CORE CURRICULUM

This program is intended to prepare students for the professional program in landscape architecture. For an explanation and description of the University of Georgia Core Curriculum, see page 160 in this Bulletin.

PROFESSIONAL PROGRAM

Requirements for the professional program are outlined in the Programs of Study section of this Bulletin.

Courses of Instruction

Courses for the School of Environmental Design are listed under the prefixes EDES, Environmental Design, HIPR, Historic Preservation, and LAND, Landscape Architecture.

The College of Family and Consumer Sciences



224 Dawson Hall, (706) 542-4860 (information);
(706) 542-4847 (Office of Student Services &
Alumni Relations)
FAX: (706) 542-4862
Homepage URL: <http://www.fcs.uga.edu/>

Administrative Officers

Sharon Y. Nickols, B.S., M.A., Ph.D., *Dean*
Jan Hathcote, *Associate Dean for Academic Affairs
and Research*

Christine M. Todd, *Associate Dean for Outreach*
Lynn Hogan, *Director of Student Services and
Alumni Relations*

Patsy Skeen, *Department Head, Department of Child
and Family Development*

Roy Martin, *Department Head, Department of
Foods and Nutrition*

Anne Sweaney, *Interim Department Head,
Department of Housing and Consumer Eco-
nomics*

Ian Hardin, *Department Head, Department of
Textiles, Merchandising & Interiors*

General Information

PURPOSE AND ORGANIZATION

The College of Family and Consumer Sciences offers educational programs that

lead to a number of professional careers. The curricula provide well-rounded programs of general, scientific, and technical education.

Upon completing core curriculum requirements, students take specialized professional courses specific to their majors and professional goals. Applied learning experiences and internships are emphasized in all programs of study in order to prepare students for their future work settings. Leadership and communication skills are also emphasized through various college programs and activities as are experiences that promote knowledge of and sensitivity to issues of multicultural diversity.

FACILITIES

Dawson Hall and Speirs Hall, located on South Campus, house the modern and fully equipped teaching laboratories and classrooms for foods, nutrition, and textiles, as well as research and computer laboratories. A calorimetry laboratory is located in Boyd Graduate Studies Building.

The Margaret E. McPhaul Child and Family Development Center houses laboratories for instructional, clinical, and research activities which provide opportunities for observations of and work with normal infants, children under six, parents, and families. In addition, early intervention and Head Start programs operate as integral parts of the McPhaul Center and provide instructional, research, observational, and participation opportunities with young developmentally challenged children and their families.

The Housing and Demographics Research Center (HDRC) provides sound housing research, promotes a more rational regulatory environment for the building community, and disseminates research findings to policy makers, interested parties and the general public.

Academic Information

ADVISING

Faculty are responsible for academic advising of sophomores, juniors, and seniors in the College of Family and Consumer Sciences. First-year students are advised by the Office of Student Services and Alumni Relations. Students transferring into the College receive initial advising in the Office of Student Services and Alumni Relations.

DEGREES OFFERED

The College of Family and Consumer Sciences offers the degree of Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.), with majors in Child and Family Development; Foods and Nutrition; Housing and Consumer Economics; and Textiles, Merchandising and Interiors. The majors are described under Programs of Study in this Bulletin.

The College also offers both the Master of Science (M.S.) Degree and Doctor of Philosophy (Ph.D.) degree in all departments. For further information, refer to the *Graduate School Bulletin*.

CORE CURRICULUM

For an explanation and description of the University of Georgia Core Curriculum, see page 160 in this Bulletin.

COLLEGE-WIDE DEGREE REQUIREMENTS

CHFD 2100 or HACE 2100 is required of all students pursuing the Bachelor of Science degree in Family and Consumer Sciences.

ACCREDITATION

The College of Family and Consumer Sciences is accredited by the American Association of Family and Consumer Sciences.

SCHOLARSHIPS

There are numerous scholarships available in the College of Family and Consumer Sciences. Additional information can be obtained in the Office of Student Services and Alumni Relations.

Courses of Instruction

Courses in the College of Family and Consumer Sciences are listed under the following prefixes:

CHFD	Child and Family Development
FDNS	Foods and Nutrition
HACE	Housing and Consumer Economics
TXMI	Textiles, Merchandising and Interiors

The Daniel B. Warnell School of Forest Resources



Forest Resources Building, (706)542-2686

Fax: (706)542-8356

Homepage URL: <http://www/uga.edu/~wfstr/>

Administrative Officers

Arnett C. Mace, Jr., B.S., M.S., Ph.D., *Dean*

Bruce C. Bongarten, B.S., Ph.D., *Associate Dean*

General Information

The Warnell School of Forest Resources was established in 1906 through the generosity of George Foster Peabody. It is the oldest such institution in the southern United States. In 1991 the School was dedicated in honor of the late Daniel B. Warnell, a prominent banker, landowner, and state legislator who made major contributions to rural development, public education, and conservation of forest resources.

The educational, research, and service programs in the School address the use and management of all forest resources.

PURPOSE

The forested lands of the southeastern U.S. form a large, diverse, and productive ecosystem. The timber and wood fiber produced on these lands play an important role in the economy of the state, region, country, and world. The intangible benefits provided by these lands, including habitat for game and non-game animals, special plant associations, living filters for aquatic and atmospheric systems, places for outdoor recreation, for solitude and reflection are increasingly valued by society.

Society places many competing demands on forested and wild lands making their management a more complex and important task now than at any time in history. Managing these lands to meet competing demands requires professionals who understand how forest systems function and how they can be managed to effectively fulfill societal desires. The four undergraduate majors offered by the School address the management of the forested lands of the region from the perspectives of forestry.

wildlife, fisheries and aquaculture, and forest environmental resources.

The School educates students who are capable of being responsible stewards, competent managers and resource staff professionals, or who plan to pursue graduate study. The curriculum emphasizes the biological and physical science knowledge base that supports responsible management, the required economic and social science base, the quantitative skills necessary for the rational analysis of management alternatives and decisions, and the communication and interpersonal skills required to be professionally effective. The curriculum has been designed to emphasize the holistic nature of forest resource systems.

FACILITIES

The Daniel B. Warnell School of Forest Resources is located in a complex of four buildings on south campus. The School manages almost 30,000 acres of forest land including the 800-acre Whitehall Forest, located four miles from the main campus. This forest serves as a field laboratory for instruction and research. Facilities include experimental fish ponds, a wildlife and fisheries laboratory, a tree nursery, and a wood utilization and plant sciences building.

Other major forest areas managed by the School include: 1) the Oconee Forest Park, a recreation and teaching forest located at the edge of the main campus; 2) the B.F. Grant Memorial Forest, a parcel comprising 13,000 acres of Putnam County, used primarily for research and demonstration; 3) the Thompson Mills Forest, which is Georgia's official arboretum; and 4) the 1,500-acre Satilla River Forest, devoted to wildlife and fisheries research. In addition, the School operates the Cohutta Fisheries Research and Extension Center located in northern Georgia about 150 miles from Athens. The School also manages several properties that were given to the University of Georgia Foundation as gifts to the Warnell School of Forest Resources. These include the 7500 acre Kimberly-Clark Property in central Georgia and the 2500-acre Wheatley Property on Lake Blackshear in southwestern Georgia.

Academic Information

ADVISING

Forest Resources students attending the University of Georgia are advised by faculty and staff of the Warnell School of Forest Resources. Students attending other institutions who plan to enter one of the four forest resources majors at the University of Georgia should contact the Office of the Associate Dean, Warnell School of Forest Resources, for guidance in program planning and course selection.

Selection of appropriate courses to meet degree requirements is the responsibility of the student. Assistance is available through printed material and the School's academic advising program. Students should meet with their advisors each semester to plan programs of study and select courses. Students should pay particular attention to listed course prerequisites when selecting and scheduling classes in the School. Prerequisites are enforced by the OASIS registration system and permission of the advisor and the course instructor is required to override stated prerequisites for all courses in the School.

DEGREES OFFERED

The Warnell School of Forest Resources offers the professional undergraduate degree of Bachelor of Science in Forest Resources (B.S.F.R.) with majors in Forestry, Wildlife, Fisheries and Aquaculture, and Forest Environmental Resources. These majors are described in the Programs of Study section of this Bulletin.

Through the Graduate School, the Warnell School of Forest Resources offers programs of study leading to the Master of Forest Resources, the Master of Science, and the Doctor of Philosophy degrees. Persons interested in these programs should contact the Graduate Coordinator of the Warnell School of Forest Resources or refer to the *Graduate Bulletin* of the University.

ACCREDITATION

The undergraduate majors in Forestry,

Wildlife, and Forest Environmental Resources are accredited by the Society of American Foresters (SAF). SAF is the specialized accrediting body recognized by the Council on Post-secondary Accreditation and the U.S. Department of Education as the accrediting agency for forestry in the United States. Additionally, the Wildlife major meets the certification requirements of The Wildlife Society. The Fisheries and Aquaculture major meets the Professional Certification Program requirements of the American Fisheries Society.

BACHELOR OF SCIENCE IN FOREST RESOURCES DEGREE REQUIREMENTS

To obtain the B.S.F.R. degree, students must successfully complete 60 credits in the pre-Professional Program and 62-65 credits in the Professional Program (depending on major). In addition, students must meet the University's basic physical education and residency requirements. Students will typically spend four semesters in residence in the Professional Program.

Pre-Professional Curriculum

The pre-Professional curriculum meets the University Core Curriculum requirements. It may be completed at the University of Georgia or at other institutions. Students taking pre-Professional course work at another institution should contact the Office of the Associate Dean, Warnell School of Forest Resources, for assistance in planning programs of study and for confirmation of transfer credit. See page 160 of this Bulletin for an explanation and description of the University of Georgia Core Curriculum.

Professional Curriculum

The Professional curriculum consists of 62-65 credits of which 27 are common to all four majors. Courses common to all majors include study in field measures, ecology, soils and hydrology, fish and wildlife management, biometrics, and forest resources management and policy. All students complete a senior project or senior thesis that integrates previous course work.

Forestry majors choose one of seven Areas of Emphasis: Forest Management, Forest Business, Forest Biology, Forest Recreation, Forest Policy and Administration, Urban Forestry, and Wood Utilization. Students majoring in Forest Environmental Resources choose one of three Areas of Emphasis: Soil and Water, Hydrology and Environmental Systems, and Environmental Resource Assessment. The Wildlife and Fisheries and Aquaculture majors have no Areas of Emphasis.

A complete listing of required courses in each major can be found in the Programs of Study section of this Bulletin.

ADMISSION

Pre-Professional Program

Admission to the pre-Professional Program is handled through the University of Georgia Undergraduate Admissions Office. On the UGA application, indicate "Forest Resources" as the school or college in which you plan to enroll and choose Pre-Forest Resources as your major.

Professional Program

To be admitted to the Professional Program, students must first be admitted to the University through the University Admissions Office. Then they must be admitted to the Warnell School of Forest Resources through a separate application procedure. Application forms for admission to the Warnell School are available from the Office of the Associate Dean.

Students may apply for entry to the Professional Program in fall or spring semester. A maximum of 60 students will be admitted each semester. Applications for fall semester admission are due April 1. Applications for spring semester admission are due September 15. *Note that these deadlines may be earlier than University of Georgia application deadlines.*

Eligibility for Admission to the Professional Program

At the time of matriculation in the Professional Program, students must have completed the pre-Professional curriculum, except that up to 8 credits of electives

(and/or SPCM 1100) may be deferred if an equal number of credits have been completed from the following courses: ECOL 3260-3260L (Wildlife and Fisheries and Aquaculture majors only), FORS 3010-3010L, FORS 3020-3020L, and CRSS (FORS) 3060-3060L.

Admissions Process

- Students who meet the above eligibility requirements and have an overall GPA of 3.0 or higher will be admitted immediately into the Professional Program.
- Students who meet the above requirements and have an overall GPA greater than or equal to 2.5 and less than 3.0 will be admitted into the Professional Program subject to enrollment limitations.
- Students who meet the above requirement and have an overall GPA less than 2.5 may be admitted if openings are available and if they provide satisfactory evidence that they can perform academically at the level expected of students in the Professional Program. Students should submit a statement explaining their academic performance and efforts to improve it.
- Students who have not completed the required course work will be deferred until requirements are met. Students who are deferred or denied admission may appeal the decision to the Associate Dean by written petition.

Student Services and Programs

FINANCIAL AID

In addition to the financial assistance offered through the University's Office of Student Financial Aid, a number of scholarships and awards are available specifically for undergraduate students in forest resources. These awards total about \$80,000 annually, and are made possible by donations from forest-related industries and organizations, and from alumni and other interested individuals.

Selection for these scholarships is based on academic achievement, leadership ability,

and financial need. Application forms may be obtained from the Office of the Associate Dean.

INTERNSHIPS AND COOPERATIVE EDUCATION PROGRAMS

An active internship program gives students the opportunity to supplement their classroom studies with practical experience in forest resource management. Students may work with private companies, landowners, conservation organizations, and federal and state agencies.

We also offer a Cooperative Education Program with federal and state agencies such as the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Georgia Department of Natural Resources. Students may alternate semesters of off-campus work with semesters of on-campus study. Although we make every effort to facilitate cooperative education, the arrangement for such programs is usually left to student initiative.

STUDENT ORGANIZATIONS

Participation in School-related extracurricular activities is a tradition among students in the Warnell School of Forest Resources. The Forestry Club, open to all Professional and pre-Professional students, serves a variety of social, service, and professional development functions. Four professional societies, the Society of American Foresters, The Wildlife Society, The University of Georgia Fisheries Society, and the American Water Resources Association, sponsor student chapters, which are open to Professional and pre-Professional students. These organizations foster professional development and the opportunity to practice leadership skills. Students who excel scholastically may qualify for election to membership in Xi Sigma Pi, the forestry honor society.

Courses of Instruction

Courses for the Warnell School of Forest Resources are listed under the prefix FORS. Forest Resources.

The Henry W. Grady College of Journalism and Mass Communication



Journalism Building, (706) 542-1704
FAX: (706) 542-4785
Homepage URL: <http://www.grady.uga.edu>
E-Mail: gradyabj@uga.cc.uga.edu

Administrative Officers

J. Thomas Russell, A.B.J., M.S., Ph.D., *Dean*
Leonard N. Reid, B.S., M.S., Ph.D., *Associate Dean for
Research and Graduate Studies*

General Information

PURPOSE

The mission of the Grady College of Journalism and Mass Communication is teaching, research and service. To fulfill its mission most effectively the College continually seeks minority students and faculty.

Teaching

Undergraduates prepare for careers in the mass media, corporations, government

agencies, non-profit organizations and other institutions that disseminate information and ideas to the public. Critical skills to gather, prepare, and disseminate information are developed. The function, ethics, history, law and significance of mass communication in society are studied. The role of a free, responsible media in a democracy is emphasized.

Graduates receive advanced training in the practice, management and evaluation of mass communication for future policy makers, teachers and practitioners in the media, industry, academia and government.

Research

Through research and practice, the faculty develops knowledge to fulfill the College's mission. Advances gained through research are disseminated to students, teachers, scholars, media professionals, and the public through classes, seminars, publications, and other means of communication.

Service

Knowledge and expertise is provided to foster a communications industry that is financially sound and best serves a democratic citizenry by helping them use and evaluate communications effectively.

ORGANIZATION

The Grady College is organized into three departments: Advertising and Public Relations, Journalism, and Telecommunications.

FACILITIES

Housed in a modern multimillion-dollar communication center, the College provides some of the best instructional facilities available. Included are classrooms equipped with color televisions for closed-circuit broadcast, two large theater-style auditoriums, audio studios, color-equipped television studios, complete packages of portable color television cameras and videotape recorders, videotape editing facilities, satellite communications equipment, state of the art advertising, graphics, photography, news writing and editing laboratories and typesetting equipment. The Drewry Learning Resources Center supplements the University of Georgia Libraries. Elevators at street level make all floors accessible to persons with disabilities.

Academic Information

ACCREDITATION

The College is accredited by the Accrediting Council on Education in Journalism and Mass Communications.

ADVISING

Journalism and Mass Communication students are assigned to professional academic advisers, with exception of honors students in the Department of Journalism who are advised by departmental faculty.

Ultimately it is a student's responsibility to stay apprised of degree requirements; however, advisers are available by appointment to assist in planning schedules

for registration and for reviewing progress toward the ABJ degree. They will neither recommend nor approve courses which do not fulfill a student's specific degree requirements.

Pre-journalism students are advised by professional academic advisers in the College of Arts and Sciences and are expected to be admitted to the college upon reaching junior standing.

DEGREES

The College offers an undergraduate degree of Bachelor of Arts in Journalism (A.B.J.) and advanced degrees of Master of Arts (M.A.), Master of Mass Communication (M.M.C.) and Doctor of Philosophy (Ph.D.)

GENERAL DEGREE REQUIREMENTS

A.B.J. degree candidates must meet general degree requirements applicable to all students at the University as set forth in the Academic Information section of this Bulletin.

REQUIREMENTS FOR THE ABJ DEGREE

Sixty semester hours must be earned in the core and, depending on major, 30-32 hours in journalism and mass communication course work, 15 hours in major electives and 13-15 hours in other electives, for a total of 120 hours. Physical Education hours are extra.

CORE CURRICULUM

For a description and explanation of the University of Georgia Core Curriculum, see page 160 of this Bulletin.

MAJORS

The College offers the following majors which are described in the Programs of Study section of this Bulletin: Advertising, Public Relations, Magazines, Newspapers, Publication Management and Telecommunications.

CHANGE OF MAJOR

A change of major within the College requires approval by the Admissions Committee and cannot be assumed as automatic; therefore, careful thought should be given to a choice of major at time of application and admission. Further, approval to change majors does not imply approval of journalism courses already taken in another major nor in major electives. Loss of graduation credit could occur.

DOUBLE MAJORS AND DUAL MAJORS

Students may not earn more than one undergraduate degree within the College. Due to the competitiveness of admission and the limited number of spaces available each semester, students may not simultaneously pursue the ABJ degree and that of any other school or college. Upon completion of the ABJ degree those who care to pursue a second undergraduate degree should consult with the appropriate department, school or college.

SECOND UNDERGRADUATE DEGREE

If a baccalaureate degree was earned in other than journalism and mass communication from an accredited institution, application may be made for a second bachelor's degree.

Applications are accepted only from students who have met minimum requirements in cumulative and overall grade point averages of at least 2.7 and English proficiency (recentered SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Depending on the degree, satisfactory completion of 30-32 semester hours of

journalism and mass communication courses are required to earn a second degree. Additional prerequisite hours may be required if the Admissions Committee feels there are deficiencies in the humanities, social sciences or other areas of the core.

IRREGULAR AND TRANSIENT STATUS

Irregular and transient students are non-degree seeking at the University of Georgia and do not apply for admission to the College.

Irregular students who are interested in taking journalism and mass communication courses *may be* admitted as pre-journalism majors in the College of Arts and Sciences. These students usually have earned an undergraduate degree and are enrolled for a limited time.

Transient students are candidates for degrees at other institutions. They *may be* admitted as pre-journalism majors in the College of Arts and Sciences for one semester with the intention of transferring credits to their parent institutions.

Availability of journalism and mass communication courses for students in these categories cannot be guaranteed.

MINOR

Contact the Office of Undergraduate Services, Room 201, for information.

GRADUATION REQUIREMENTS

The graduation coordinator monitors each student's progress toward completion of requirements for the A.B.J. degree. The purpose is to identify and solve problems that could delay graduation. Journalism and mass communication students are expected to pursue degree requirements and graduate in a timely manner. Students are cleared for graduation as soon as final degree requirements are met. Delaying graduation to permit scheduling courses in pursuit of another major or for the purpose of self-enrichment will not be permitted.

HONORS PROGRAM

The College encourages superior academic achievement by endeavoring to identify, recruit, and assimilate into the University's academic life students with outstanding academic potential.

Honors students may be able to develop programs of study that have greater flexibility and include more challenging courses.

Qualified students have opportunities for individual readings and projects, honors theses, honors option courses, area study majors, and a combined A.B.J./M.B.A. program offered cooperatively by the Colleges of Journalism and Business.

COURSE CHALLENGE

Students who are degree candidates at the University and are currently enrolled for resident course work may be able to attempt a challenge of certain journalism and mass

communication courses if they can demonstrate they have mastered skills through experience outside the classroom. Requirements may differ but can include a review of work skills, a practical examination, a written test, and an oral examination. A decision must be made prior to the examination whether the challenge is for credit or for exemption without credit. A course may be challenged only once and the challenger may not be currently or previously enrolled in the course or a prerequisite for the one being challenged. The challenge must first be approved by the head of the department that teaches the course.

PETITION

A waiver in College rules or curriculum requires a written petition to the College's Executive Committee. Forms may be obtained from the Office of Undergraduate Services and must be submitted by midpoint of the semester.



ENGLISH PROFICIENCY TEST

The English Proficiency Test is administered on a group basis by the Testing Center in Clark Howell Hall at a specified time each semester. It may be taken on an individual basis by special arrangement with the Center. The test may be taken an unlimited number of times; however, it may be taken only *twice* per semester. Deadline for taking the test is Friday of the first full week of the semester if applying the same semester; the test is not administered the second week of the semester. A nominal fee is charged.

ORIENTATION

Orientation for newly-admitted students provides information on advising, obtaining permission of department to register for courses, internships, rules, requirements and other procedures specific to the Grady College, plus other important matters.

KEYBOARDING SKILLS

Students enrolling in Journalism and Mass Communication courses are expected to have adequate keyboarding skills to meet course requirements.

Other Services and Programs

STUDY ABROAD

Students interested in adding an international learning experience to their collegiate education may wish to participate in a 7-week summer program in Parma, Italy and London, England co-sponsored by the Departments of Journalism and Drama.

NATIONAL STUDENT EXCHANGE

Journalism and Mass Communication students from other colleges and universities who participate in the National Student Exchange at the University of Georgia are usually committed to a specified period of study and do not apply for admission to the Grady College. They are admitted to the University as pre-journalism students in the College of Arts and Sciences.

PLACEMENT

Through its placement office the College assists students in locating internships and entry-level employment. Among other valuable services it provides is a prospectus which lists students by name with their qualifications and their employment preferences that is forwarded to hundreds of employers each year.

INFORMATION

A copy of the College's handbook can be requested from the Dean's Office, College of Journalism and Mass Communication, University of Georgia, Athens, GA 30602-3018.

Courses of Instruction

Courses for the College of Journalism and Mass Communication are listed under the following prefixes:

ADPR	Advertising and Public Relations
JOUR	Journalism
JRLC	Journalism Core
TELE	Telecommunications

The School of Law



Law Building, (706) 542-7140

FAX: (706) 542-5556

Homepage URL: <http://lawsch.uga.edu/>

Administrative Officers

Edward D. Spurgeon, B.A., J.D., LL.M., *Dean*

Paul M. Kurtz, B.A., J.D., LL.M., *Associate Dean*

Gabriel M. Wilner, A.B., D.P.A., LL.B., LL.M.,
Associate Dean

General Information

PURPOSE

Because its first duty is to prepare men and women for the legal profession, the School of Law stresses excellence in teaching. It seeks to impart to its students a broad understanding of the nature of the legal system and the analytical and other skills necessary for effective participation in the profession. It also seeks to instill in its students a keen sense of professional integrity and an awareness of their responsibility as guardians of the law.

In addition to its emphasis on teaching, the School of Law recognizes its role as a center for scholarly research and service in the law. It seeks to explore the problems of society and to contribute to their resolution

through teaching, research, and service. As a part of the University, the School of Law endeavors to contribute in a significant way to the life of the University community and to participate in interdisciplinary efforts to advance learning.

METHOD OF INSTRUCTION

In general, the School operates under the case method of instruction. The student studies actual cases, deducing from them the principles of law involved. This approach tends to develop in the student the power of analysis of legal problems. In addition, however, the study of cases is supplemented by statutory and textual materials. Instruction is also given in the drafting of legal instruments.

Practical instruction in the preparation and trial of cases is given in clinical programs, involving both simulated situations and work with practicing attorneys on litigation and other legal matters. Exercises conducted relate to the preparation of pleadings, examination and cross-examination of witnesses, writing of briefs, presentation of arguments to the court and jury, taking of cases from lower courts to appellate courts, and other related subjects.

FACILITIES

The School of Law is housed in a modern complex built on the original wooded quadrangle of the University's North Campus. Completed in 1967, the main building occupies 135,739 square feet. In addition to lecture halls, seminar rooms, and administrative and faculty offices, Hirsch Hall houses a 500-seat instructional auditorium and federal-style courtroom. Two student lounge areas and student organization offices are provided in the complex.

The law library, with its two-story ceiling and glass wall, is spacious and well-illuminated. The library houses more than 117,000 titles, which places it in the top 25 among United States law schools. The collection includes a comprehensive listing of material on Anglo-American law and extensive holdings in the law of international relations and in foreign law.

A law library annex opened in 1981 houses a spacious reading room, shelf space for one-third of the present collection, student journal offices and audio-visual instructional facilities. The library offers the LEXIS and WESTLAW computerized research systems. Dean Rusk Hall, home of the Rusk Center for International and Comparative Law, was opened in 1996. In addition to the Center, Rusk Hall contains faculty offices, library shelving and a technologically advanced courtroom, suitable both for teaching and use in moot court activity. Rusk Hall has added 35,000 square feet of space to the Law School facilities.

ACCREDITATION

The School of Law is a member of the Association of American Law Schools and is on the approved list of the American Bar Association and the State Bar of Georgia.

Academic Information

DEGREES OFFERED

The School of Law offers the Juris Doctor and Master of Laws degree. Joint degree programs are also available. Complete information about these degree programs

may be found in the Law and Graduate School Bulletins.

GENERAL ADMISSION REQUIREMENTS

An applicant for admission as a candidate for the degree of Juris Doctor must hold a bachelor's degree from an accredited (as defined in AALS and ABA regulations) college or university. Compliance with minimum standards does not, however, guarantee admission. Acceptable required work connotes more than satisfaction of minimum academic requirements; rather, it represents substantial scholastic attainment. Moreover, suitability of applicants for admission is gauged not only by their undergraduate record, but also by their character and reputation, the nature of their training and experience, and by their demonstrated aptitude for the study of law.

The School of Law does not require a specific pre-legal course of study. The prospective law student is encouraged to seek a broad general education which will tend to develop ability to communicate both orally and in writing and impart substantive knowledge of genuine intellectual content. Any subject content, regardless of field, which helps develop clear and systematic thinking constitutes sound preparation for the study of law.

LAW SCHOOL ADMISSION TEST

Questions relating to the Law School Admission Test, the Law School Data Assembly Service and application procedures should be addressed to the Admissions Office, School of Law, The University of Georgia, Athens, Georgia 30602.

TRANSFER STUDENTS

The dean may, at his discretion, give full credit for work completed at other law schools. Transfer should be requested only after completion of one year of study, and prior to beginning the second year of study, in order to meet residence requirements for a degree at the University of Georgia. Transfer requests should be made directly to the Law School Admissions Office.

VISITING STUDENTS

Students in good academic standing at other law schools may be admitted as visiting students to enroll for a summer term or an academic year or semester. Prospective visiting students should contact the Law School Admissions Office for information about admission policies and procedures.

Student Services and Programs

SCHOLARSHIPS, LOANS AND STUDENT EMPLOYMENT

Law students are eligible for scholarships, grants, loan funds and employment as research assistants through the University and the Law School. Write to the Director of Admissions of the School of Law for further information.

CLINICAL AND WRITING PROGRAMS

Law students attending the University of Georgia may participate in activities which include three scholarly journals, several clinical programs, Moot Court and Mock Trial competitions, student government, legal fraternities, and many special interest organizations.

The Georgia Law Review, the *Georgia Journal of International and Comparative Law*, and the *Georgia Journal of Intellectual Property*, edited entirely by students, are nationally circulated publications which provide a forum for articles by professors, judges, attorneys, and students on developments in the legal field.

Practical education in criminal and civil procedure is a benefit of the Prosecutorial Clinic, Legal Aid and Defender Clinic, and the Civil Clinic. Under supervision of practicing attorneys, students have the opportunity to develop counseling, investigatory and trial skills. Under Georgia law, certified third-year students are permitted to try cases in local civil and criminal courts.

The School of Law sponsors teams in numerous national and regional Moot Court

and Mock Trial competitions. Team members are drawn from outstanding candidates in annual intramural competitions.

Georgia's Student Bar Association is affiliated with the Law Student Division of the American Bar Association. Also included in student government is the Honor Court. Among the many student interest organizations are the Environmental Law Association, Women Law Students Association, Black Law Students Association, the Federalist Society, and the Georgia Society of International and Comparative Law.

CONTINUING LEGAL EDUCATION

In 1965, the School of Law joined with the State Bar of Georgia and the law schools of Mercer and Emory Universities to establish the Institute of Continuing Legal Education in Georgia. In 1978, the Institute of Continuing Judicial Education was created through the sponsorship of the School of Law and Georgia's Judicial Council. The two institutes, which are housed in Athens, plan and conduct seminars and short courses for judges and attorneys throughout the State of Georgia.

SIBLEY LECTURES

Supported by a private foundation, the John A. Sibley Lectureship in Law brings to Athens outstanding legal scholars who meet with regularly scheduled classes.

PLACEMENT

The School of Law offers assistance to every law graduate in securing suitable professional employment. Through the Office of Legal Career Services, the student is offered guidance and counseling in selecting an employment objective. While the state of Georgia continues to attract most Law School graduates, students accept positions throughout the country and the world. Graduates serve as judicial clerks, corporate counsel, government attorneys, public interest lawyers, and prosecutors, as well as in private practice.

The College of Pharmacy



Wilson Pharmacy Building, (706) 542-5278

FAX: (706) 542-5269

Homepage URL: <http://www.rx.uga.edu>

Administrative Officers

Stuart Feldman, B.S. M.S. Ph.D., *Dean*

George E. Francisco, B.S., Pharm.D., *Associate Dean*

Joseph T. DiPiro, B.S., Pharm. D., *Assistant Dean*

General Information

PURPOSE

The College of Pharmacy provides for the comprehensive academic needs of the profession of pharmacy. The College's doctor of pharmacy degree program prepares students for the practice of pharmacy and the delivery of pharmaceutical care. Its graduate program prepares individuals for professional specialization and careers in teaching and research. The post-graduate educational needs of the profession are met through the College's continuing education and nontraditional

doctor of pharmacy programs. Faculty research supports all of these programs and contributes to the advancement of the body of pharmaceutical knowledge.

FACILITIES

The College of Pharmacy is housed in the Robert C. Wilson Pharmacy Building located on South Campus of the University of Georgia. The Wilson Pharmacy building has served as the home of the College since its completion in 1964. Additional educational sites are maintained on the campus of the Medical College of Georgia in Augusta. To provide for the experiential application of pharmaceutical knowledge, clinical training of pharmacy students is conducted in Athens, Augusta, Atlanta, Savannah, and other sites around the state.

ACCREDITATION

The College of Pharmacy is accredited by the American Council on Pharmaceutical Education.

Academic Information

DEGREES OFFERED

The Doctor of Pharmacy (Pharm.D.) degree is awarded to students who successfully complete a six-year study of prescribed courses. The first two years (pre-pharmacy) may be completed at any accredited institution of higher education. Complete information about degrees may be found in the *College of Pharmacy Bulletin*.

GRADUATE STUDY

The Graduate School of the University of Georgia offers the Master of Science and Doctor of Philosophy degrees in various specialty areas of pharmacy. Complete information about these degree programs may be obtained by calling the College of Pharmacy (542-1911) or by visiting the College's web site (<http://www.rx.uga.edu>).

ADMISSION REQUIREMENTS

To be admitted to the professional degree programs in the College of Pharmacy, a student must complete pre-pharmacy curriculum requirements. Applicants to the professional program must take the Pharmacy College Admission Test (PCAT). The fall test date prior to the projected entrance date is preferred. The application deadline is February 15 of each year.

PRE-PHARMACY CORE CURRICULUM

For a description and explanation of the University of Georgia Core Curriculum, see page 160 in this Bulletin. For specific pre-pharmacy requirements, contact the Office of the Dean, College of Pharmacy.

The School of Social Work



Tucker Hall, (706) 542-3364

FAX: (706) 542-3282

Homepage URL: <http://www.ssw.uga.edu>

Administrative Officers

Bonnie L. Yegidis, B.A., M.S.W., Ph.D., *Dean*
Nancy P. Kropf, B.A., M.S.W., Ph.D., *Associate Dean*

Katheryn B. Davis, B.A., M.S.W., *Director, Undergraduate Program*

General Information

The Bachelor of Social Work degree is the first professional social work degree. This program of study prepares the student for beginning professional practice as a social worker. The liberal arts base combined with appropriate professional courses provide the fundamental knowledge and skill needed to assume the role of a beginning practitioner. The appropriate social work value and ethical base necessary for professional practice is also a central part of the curriculum. The student exits the B.S.W. program as a generalist in the field of social services.

PURPOSE

The goal of the School of Social Work is to provide an education designed to prepare the undergraduate student for beginning professional social work practice.

This goal is to be realized through:

- (1) Providing intellectual stimulation for students in a search for knowledge and truth and to aid them in developing problem-solving processes for professional use in helping individuals, families, groups, and communities.
- (2) Helping to develop students' learning and introspective stances which will serve their lifelong learning needs and development of self-awareness.
- (3) Motivating students to develop the capacity to evaluate their own practice, and to evaluate and use the research findings of others.
- (4) Enabling students to gain knowledge and to develop values and skills appropriate for beginning professional social work practice as a generalist.

FACILITIES

The School of Social Work is located in Tucker Hall on South Campus. Extensive University resources enrich the curriculum of the School of Social Work. Research facilities include the resources of the Computer Center, the Institute of Behavioral Research, and the Social Work Research Center.

ACCREDITATION

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education.

Student Services and Programs

ACADEMIC ADVISING

Selection of appropriate courses to meet degree requirements is the responsibility of the student. Certain printed material and the School's academic advising program are available to assist the student. Students are expected to arrange appointments with the advisors each semester for planning programs of study and course selection.

Each student in the School of Social Work is assigned a faculty advisor. In addition to assisting students with selection of an appropriate course of study, advisors assist upper division students in their professional development.

HONORS PROGRAM

Qualified students are encouraged to participate in the University of Georgia Honors Program. Appropriate academic advising is provided for B.S.W. students who are also in the Honors Program.

STUDENT ORGANIZATIONS

The College Social Work Association is the School's official baccalaureate student organization providing B.S.W. students with opportunities to participate in volunteer service and educational presentations, and to interact with other social work majors.

Meetings are held periodically throughout the academic year.

Academic Information

DEGREE OFFERED

The School of Social Work offers the undergraduate degree of Bachelor of Social Work (B.S.W.).

ADMISSION TO THE UPPER DIVISION PROFESSIONAL PROGRAM

The academic program for students seeking the B.S.W. degree is composed of two parts: (1) Pre-professional enrollment for freshmen, sophomores, juniors and transfer students preparing for entry into the professional program; and, (2) the professional foundation program completed during the senior year.

Pre-professional enrollment is open to students meeting regular admission requirements at the University of Georgia. Admission to the professional foundation program occurs at the senior level. Students must have satisfactorily completed 90 semester hours plus one hour of P.E., including all core requirements. A student must have an overall and cumulative GPA of 2.5 or better and a combined average of 3.0 in SOWK 2101 and 2154. Prior to entering the professional program, all applicants must complete 50 clock hours of an advisor-approved human service experience. In addition, throughout the program evaluation of the student's performance will determine the student's compatibility to the professional practice of social work.

UNDERGRADUATE DEGREE REQUIREMENTS

Students are required to acquaint themselves with general degree requirements applicable to all students of the University as set down in the Academic Information section of this Bulletin. Specific requirements for the B.S.W. degree are listed in the Programs of Study section of this Bulletin.

The primary aim of the B.S.W. program is excellence in the general practice of social

work, and its curriculum and methods of pedagogy are designed to produce an environment in which this excellence can flourish. The program of study leading to the B.S.W. degree requires 126 semester hours plus one hour of P.E. and offers a clearly defined progression of course work culminating in the applied study of the general practice of social work during the senior year.

During the first two years of study students are expected to meet liberal arts objectives through completion of courses which make up the core requirements of the University of Georgia. The core is divided into six broad content areas: Essential Skills, Institutional Options, Humanities/Fine Arts, Science/Math/Technology, Social Sciences, and Social Work Related Courses.

In consultation with the advisor, during the junior year students select additional courses which further enrich the liberal perspective and which prepare students for entry into the professional foundation program. Students complete two courses in social work during their first three years of study: SOWK 2101, The Social Welfare Institution and SOWK 2154, The Profession of Social Work.

Building on the liberal arts base, the senior or professional foundation year is designed to prepare students for beginning social work practice through a year-long practicum and course offerings which establish:

- a base of knowledge in understanding human behavior from a person-in-environment perspective;
- introductory knowledge and skills related to social work practice with individuals, families, groups, organizations and communities from a person-in-the-environment perspective;
- knowledge of historic and current institutional policies which serve as a general framework for the provision of social services in the United States; and
- introductory knowledge of analytical and evaluative methods of knowledge building and application in social work practice and social welfare settings.

Content regarding human diversity is infused throughout the professional curriculum, building on specific courses in African American and Women's Studies taken as part of the core. Transfer credit for courses in social work will be evaluated on a case-by-case basis. In no case will courses numbered 3000 or above be accepted from institutions which are not accredited by the Council on Social Work Education. No transfer credit will be accepted for SOWK 5524, 5534, 5544, 5835, and 5845. For further information contact the Office of the Director, Undergraduate Program, School of Social Work, Tucker Hall.

NOTE: All students will be expected to complete 50 clock hours in an advisor-approved human services setting and attend an orientation session before they are permitted to enroll in professional foundation course work. Proof of professional liability insurance will be required before students are permitted to enroll in SOWK 5836.

Courses of Instruction

Courses in the School of Social Work are listed under the prefix SOWK.

The College of Veterinary Medicine



Veterinary Medicine Building, (706) 542-5728

FAX: (706) 542-1004

Homepage URL: <http://www.vet.uga.edu>

Email: ywilson@calc.vet.uga.edu

Administrative Officers

Keith W. Prasse, B.S., M.S., D.V.M., Ph.D., *Dean*

Sheila W. Allen, D.V.M., M.S., *Associate Dean for Academic Affairs*

Harry W. Dickerson, B.V.Sc., Ph.D., *Associate*

Dean for Research and Graduate Affairs

Edward A. Mahaffey, D.V.M., Ph.D., *Associate*

Dean for Public Service and Outreach

Harold E. Snyder, B.S., M.S., *Assistant to the Dean*

General Information

PURPOSE AND ORGANIZATION

Veterinary medicine is the health profession that applies the principles of the biomedical sciences to health and disease in animals. It also has important direct and indirect implications for human health through research. Veterinary medicine is a unique combination of medical, agricultural, and biological sciences.

The University of Georgia College of Veterinary Medicine is designed to meet

the educational needs of prospective veterinarians from the Southeast. At present, students are accepted from Georgia, South Carolina, and West Virginia through a Southern Regional Education Board agreement. A limited number of students who are residents of other states also may be admitted. Quotas for South Carolina and West Virginia are subject to change by the Southern Regional Education board each year. Residents of other states will be considered. Interested persons should contact the Office of the Associate Dean for Academic Affairs for current information. Up to 80 students may be admitted to the four-year curriculum each fall.

The College of Veterinary Medicine also has postgraduate instructional responsibilities, which are described in the separate *College of Veterinary Medicine Bulletin*. Such additional training is necessary to prepare students for careers in teaching, research, and clinical specialties. In addition, a program of continuing education for veterinary practitioners is offered to keep the profession up-to-date on advances in the science and art of veterinary medicine.

Research programs intended to ensure the health of the animal resources of Georgia and to protect the human population from those diseases transmittable from animals to man are conducted in the Veterinary Medical Experiment Station. Studies are conducted on diseases of farm animals, pets, wildlife, poultry, fish, marine life, horses, and laboratory animals. These research programs are an integral part of the training of graduate students.

The College faculty also functions in various service capacities through the facilities of the College's Teaching Hospital and the Veterinary Diagnostic Laboratories, located in Athens and at Tifton, Georgia.

FACILITIES

The College comprises clinics, offices, laboratories, and classrooms designed to meet the needs of practicing clinicians and students. Facilities for animal surgery, autotutorial instruction, a library, a computer-assisted learning center, and a student lounge are available in the College. A wing housing offices with adjacent laboratories, a complete electron microscopy suite, laboratory animal facilities, and laboratories for parasitology, physiology, pharmacology, toxicology, and surgery was occupied in 1973. The teaching hospital, which opened in the Fall of 1979, more than tripled the College's hospital capacity. Additional space for maintaining animals is available at a veterinary farm and the Poultry Diagnostic Research Center.

Diagnostic Laboratories

Dr. Louis E. Newman, Director, Tifton Lab
Dr. Doris M. Miller-Liebl, Director, Athens Lab

The College maintains diagnostic laboratory facilities in Tifton and Athens to assist the veterinarian in diagnosing animal diseases. Funded by the Georgia Department of Agriculture, the laboratories are designed to handle problems concerning large and small domestic animals, as well as laboratory and exotic animals. Laboratory services include pathology, microbiology, toxicology, and serology. Both facilities are staffed by veterinary medical diagnosticians and

technicians. Though the labs exist primarily as a service to animal owners through their veterinarians, many diagnostic laboratory cases are utilized by faculty members for instructional purposes.

Veterinary Teaching Hospital

Dr. Douglas Allen, Jr., Hospital Director
Robert L. Gearhart, Hospital Administrator
The foremost objective of the Veterinary Teaching Hospital is to provide clinical experience for students. This method of instruction enables the veterinary medical student to gain familiarity with veterinary clinical cases under the supervision of practicing clinicians. The staff is composed of faculty members board certified in various specialties of veterinary medicine and surgery including internal medicine, surgery, radiology, dermatology, ophthalmology, cardiology, neurology, anesthesiology, reproduction, food animal and equine medicine and surgery, and herd health management. In addition, the services and hospital facilities are available to the private practitioner on a referral or consultation basis, and for the continuing education of practitioners.

ACCREDITATION

The College is officially recognized as an accredited institution by the Council on Education of the American Veterinary Medical Association.

Academic Information

Students in the College of Veterinary Medicine follow a four-year program of study. The first three years of the curriculum are designed to integrate a sound knowledge of the basic medical sciences with clinical application. The fourth year of the curriculum is devoted entirely to the application of basic medical sciences to veterinary medical principles and procedures in a clinical situation.

The fourth year is divided into clinical blocks of 15-21 instructional days. Each student has 12 weeks for electives and free time. Of the 12 weeks at least 4 must be

filled with electives to fulfill the requirements for graduation. Students must satisfactorily complete 53 semester credit hours during the three semesters of the fourth year.

Complete course listings and descriptions are available in the *College of Veterinary Medicine Bulletin*, copies of which may be obtained from the Office of the Associate Dean for Academic Affairs, College of Veterinary Medicine. The Veterinary College Bulletin also provides information on grading standards, dismissal policies, and other regulations for veterinary medical students.

DEGREES OFFERED

The professional clinical degree offered by the College is the Doctor of Veterinary Medicine. The College also administers graduate research programs leading to masters and doctoral degrees. Specific information concerning programs at the undergraduate, professional, and graduate levels may be found in the *College of Veterinary Medicine Bulletin* and the Graduate School Bulletin, copies of which may be obtained by writing:

Office of the Associate Dean for
Academic Affairs
College of Veterinary Medicine
The University of Georgia
Athens, Georgia 30602

Graduate School
Boyd Graduate Studies Research Center
The University of Georgia
Athens, Georgia 30602

REQUIREMENTS FOR ADMISSION

Specific inquiries about admission policies may be addressed to the Associate Dean for Academic Affairs, College of Veterinary Medicine. The University of Georgia is an equal opportunity employer and does not discriminate on the basis of age, sex, or ethnic origin. Applications from qualified persons of minority groups are actively encouraged.

In order for the student entering the veterinary medical college to be prepared for the courses, he or she must have acquired certain basic scientific information. Such information is ordinarily obtained in the following undergraduate courses:



English*
Humanities and social studies
Physics**
Chemistry (inorganic and organic**)
Biology

* Information on specific courses and credit hours required can be found in the *College of Veterinary Medicine Bulletin* or in the Admissions Requirements brochure published by the College of Veterinary Medicine.

**Must be at the pre-medical sciences level and not a survey course.

Although a baccalaureate degree is not required, the student should pursue a well-rounded degree program. The requirements for admission to the College of Veterinary Medicine are based on the premise that the program of training of a veterinarian is a continuous one shared by both the undergraduate colleges and the College of Veterinary Medicine. The responsibility of the undergraduate training program is thus not only to provide the prospective student with the technical information and skills necessary to complete the DVM program, but also to help develop a broad background of experience and interest which will make it possible later to achieve a full realization of potential as an individual and a member of society.

PRE-VETERINARY MEDICAL PROGRAM

The required courses for admission to the College of Veterinary Medicine can be completed at any accredited college or in conjunction with studies in any major in the College of Arts and Sciences or College of Agricultural and Environmental Sciences. Either of these options is equally acceptable, and the decision as to which major to declare should be determined by the student's interests and ability.

COMBINED B.S.A.-D.V.M. PROGRAM

The combined B.S.A.-D.V.M. program is available at The University of Georgia. Three-year pre-veterinary students may qualify by completing the required courses of the selected major in the College of Agricultural and Environmental Sciences,

and utilizing the first year professional veterinary courses in the College of Veterinary Medicine as electives in the B.S.A. degree program.

Application

Applicants must complete and return to the appropriate state official an application form, which must be received no later than October 1. Application packets are available in August. The application must include one copy of transcripts from each institution of higher education attended by the applicant. To be eligible for consideration, the applicant must be able to complete all required courses by the end of spring term of the calendar year in which he or she intends to matriculate.

Application is open to legal residents of Georgia, South Carolina, and West Virginia. Applicants must be legal residents at the time of application to the College of Veterinary Medicine. A limited number of students from other states also may be admitted. State officials who may be contacted for application forms are:

West Virginia Residents

Director, Pre-Veterinary Medicine
Programs

Department of Agriculture and Forestry
West Virginia University
Morgantown, West Virginia 26506

South Carolina Residents

Pre-Veterinary Advisor
Department of Animal, Dairy, and
Veterinary Sciences
College of Agriculture, Forestry, and Life
Sciences
Clemson University
Clemson, South Carolina 29631

Georgia Residents and at-large Applicants

Associate Dean for Academic Affairs
College of Veterinary Medicine
The University of Georgia
Athens, Georgia 30602

A Veterinary Medical Colleges Application Service (VMCAS) application is required. This application will be forwarded when application materials are requested.

Eligibility

In order to be considered for admission, applicants must have accumulated a 2.70 grade point average.

No person is eligible for admission who has been excluded or is on probation at any school or college for deficiency in scholarship or because of misconduct. All admissions to The University of Georgia College of Veterinary Medicine are conditioned on the applicant's continued satisfactory academic work between the date of his or her conditional acceptance and actual entry into the College. A student who gains entrance to the College by misrepresentation will be immediately dismissed.

Graduate Record Examination and Veterinary College Admission Tests

Each applicant will be required to take the Graduate Record Examination (GRE) and the Veterinary College Admission Test (VCAT). Information about the GRE can be obtained from testing and evaluation centers or graduate school offices of most colleges or universities. Information about the VCAT can be obtained from the Psychological Corporation, 555 Academic Court, San Antonio, TX 78204. Information on the GRE and VCAT is included in the application packets from the college. Scores will be accepted only from tests taken within three years prior to the deadline for receipt of applications.

Notification of Applicant Status

Notification of the action of the College on all applicants will be mailed directly to the individuals prior to April 15 of each year. This action will be in the form of (1) conditional acceptance, or (2) not accepted.

STUDENT ACTIVITIES

Students are governed by a code of ethical conduct that is administered by the faculty and students. The official student governing body is the student chapter of the American Veterinary Medical Association. Students may also be involved in publication of the *Intra-Vet* newsletter, the *Veterinarius* yearbook, and the Alpha Psi and Omega Tau

Sigma professional veterinary medical fraternity publications.

Courses of Instruction

Undergraduate courses in the College of Veterinary Medicine are listed under the following prefixes:

AVMD	Avian Medicine
MMIB	Medical Microbiology
VETM	Veterinary Medicine
VPHY	Physiology and Pharmacology

See separate *College of Veterinary Medicine Bulletin* for professional and graduate courses.

The Graduate School



Boyd Graduate Studies Research Center, (706)
542-1787
FAX: (706) 542-3219
Email: gradadm@uga.cc.uga.edu
Homepage URL: http://www.uga.edu/~grad_sch/

Administrative Officers

Gordhan L. Patel, A.B., Ph.D., *Dean*
Marilyn Newhoff, B.A., M.A., Ph.D., *Associate Dean*
Marjorie Gordon, B.A., M.A., Ph.D., *Assistant Dean*
Mary Ann Keller, A.B.J., *Director of Graduate Admissions*
Sherri L. Ledford, B.A., M.Ed., *Graduate Program Administrator*
Jarvis W. McArthur, B.S., M.S., *Coordinator, Recruitment and Retention*

General Information

PURPOSE

The Graduate School has primary responsibility for the administration of advanced study in all schools and colleges of the University.

ORGANIZATION

Matters of policy relating to graduate education are determined by the graduate faculty through the graduate council. The graduate faculty consists of faculty members appointed by the president on the basis of scholarly competence (including published research or appropriate creative activities), intellectual leadership, and experience with graduate education. The policies determined by the graduate council are administered by the dean of the Graduate School.

The general degrees Master of Arts and Master of Science are offered in 26 and 40 disciplines, respectively. The Doctor of Philosophy degree is offered in 71 disciplines.

Professional master's degrees are offered in 22 areas. The Specialist in Education degree may be earned in 23 fields. Professional doctoral degrees are offered in education, music, and public administration.

FACILITIES

The Graduate School has access to the resources of the entire University. Of

particular value are the University libraries, containing over 3,400,000 books, serials and documents, and many other items including manuscripts, photographs, drawings, and maps. The collections support the curricular and research needs of the campus and are available to library users both on the campus and across the state.

The research program at the Oak Ridge Associated Universities, Oak Ridge, Tennessee, makes available facilities for research problems and thesis writing. Two coastal facilities, the Marine Institute on Sapelo Island and the Skidaway Institute of Oceanography, are available to students and faculty of the University for research and training in marine sciences. The Institute for Behavioral Research encourages a pooling of the expertise of faculty and students from various departments to attack significant social and behavioral problems at both basic and applied levels. The Institute of Higher Education is an instruction, service, and research agency of the University and works closely with other educational agencies and institutions in cooperative programs dealing with planning, development, and evaluation. The Institute of Ecology promotes research in ecology, especially large-scale, system-level studies of major environments such as forested watersheds, wetlands, lakes, rivers, tropical rain forests, and agroecosystems. Additional details are presented in the *Graduate School Bulletin*.

ASSISTANTSHIPS AND SCHOLARSHIPS

A variety of support for graduate students is available in the form of graduate assistantships, teaching assistantships, and research assistantships.

Further information may be obtained from the dean of the Graduate School. Applications for the University-wide assistantships must be filed in the appropriate department by February 15 of each year; departmental awards may normally be applied for at any time.

Academic Information

ADMISSION

Persons holding a baccalaureate degree from any institution accredited by the proper regional accrediting association are eligible to apply for admission to the Graduate School. Applicants should have ranked in the upper half of their undergraduate class and should have completed the equivalent of an undergraduate major in the field in which they propose to study. Application forms may be obtained from the Office of Graduate Admissions. Applicants for admission must submit two copies of official transcripts from all colleges and universities attended, except the University of Georgia, two official copies of scores on the required entrance examination, three letters of recommendation, and a \$30.00 nonrefundable application-processing fee. Materials submitted in support of an application will not be returned.

Applications and supporting credentials from domestic students must be received in the Office of Graduate Admissions by the following deadlines: Fall semester, July 1; Spring semester, November 15; Summer, Pre-session, April 1; and Summer, all other sessions, May 1. Applicants are urged to apply as early as possible up to one year in advance of the desired matriculation date. Departments may have earlier application deadlines which take precedence over those established by the Graduate School. Applicants should consult the departments for their specific deadlines. For information concerning deadlines for international applications, refer to the section entitled International Applicants.

Each completed application, with supporting materials, is referred to the department in which the applicant proposes to study, where it is considered by the faculty of that department. No applicant will be admitted without the recommendation of an academic unit. Final approval is given by the dean of the Graduate School.

An applicant is admitted for a specific semester. Admission is valid only when the person registers for the specified semester.

The applicant, however, may request the Office of Graduate Admissions to defer his/her registration to another semester provided that the application has not been on file for longer than six months. If the application has been on file longer than six months, a new application must be submitted.

Applicants may not register unless they have received an official acceptance letter from the Graduate School. Students participating in the Honors Program and those registered in the School of Law may enroll in graduate courses with the approval of their advisors and the dean of the Graduate School.

ENTRANCE TESTS

Entrance test scores appropriate for each application must be sent to the Office of Graduate Admissions directly by the responsible testing agency. All test scores are subject to a five-year time limitation.

Scores on the verbal and quantitative sections of the General Test of the Graduate Record Examinations (GRE) are required for admission as a prospective candidate for most graduate degrees. The Miller Analogies Test (MAT) may be used in lieu of scores on the GRE for admission to most Master of Education and Specialist in Education degree programs. The GMAT is required for applicants seeking admission as prospective candidates for the Master of Business Administration and the Master of Accountancy degrees. Applicants for the Master of Marketing Research degree may submit either the GMAT or the GRE. The Master of Arts and Doctor of Philosophy programs in business administration accept the GMAT or the GRE. The Master of Arts and Doctor of Philosophy programs in economics require the GRE. In all cases, applicants should consult the departments for specific information.

The Graduate Record Examinations and the Graduate Management Admission Test are offered several times a year at numerous testing centers in the United States and abroad. Advance registration is required. Registration forms and detailed information on the availability and character of each examination may be obtained from the Office

of Graduate Admissions or by writing to the Educational Testing Service, Princeton, New Jersey 08541. The Miller Analogies Test is given at various colleges and universities and approved by The Psychological Corporation. For information concerning the test as given at the University of Georgia, contact the Office of Testing and Evaluation, Clark Howell Hall, 706-542-3183. For information concerning the test as given at other approved testing centers, contact The Psychological Corporation, 555 Academic Court, San Antonio, Texas 78204-2498.

ADDITIONAL INFORMATION

To request admission information, write to the Office of Graduate Admissions, The University of Georgia, Athens, Georgia 30602-7402; phone (706)542-1787; email gradadm@uga.cc.uga.edu; WWW address http://www.uga.edu/~grad_sch/admit.html. Inquiries about facilities for advanced study and research, programs of study, and specific departmental requirements should be addressed to the appropriate department. More detailed information is given in the *Graduate School Bulletin*, which may be obtained by contacting the Office of Graduate Admissions.

INTERNATIONAL APPLICANTS

Since several months may be required to secure needed information and to process an application from abroad, international applicants are urged to submit application materials as early as possible, but no more than one year in advance. The application and all supporting materials of an international applicant must be received in the Office of Graduate Admissions by the following deadlines: Fall semester, May 15; Spring semester, October 15; Summer semester, February 15. Due to the intensity of summer study and the limited number of classes offered, international applicants are not encouraged to apply for summer semesters. Departments may have earlier application deadlines which take precedence over those established by the Graduate School. Applicants should consult the departments for their specific deadlines.

The application must be supported by two official transcripts from all colleges and universities attended, except the University of Georgia, two official copies of test scores on an approved entrance test, a \$30.00 nonrefundable application fee, and three letters of recommendation. Recommendations from teachers familiar with higher education programs in the United States are advantageous. Foreign applicants, for whom English is not their native tongue, must submit TOEFL (Test of English as a Foreign Language) scores, in addition to scores on an approved entrance examination.

CLASSIFICATION OF GRADUATE STUDENTS

Only those applicants who are formally admitted to the Graduate School will be eligible to register for graduate courses. At the discretion of individual schools or departments and with the approval of the dean of the Graduate School, applicants may be considered for admission to any one of the following classifications:

1) *Prospective Candidate for a Degree.*

Applicants who meet all requirements for admission to a degree program may apply as prospective candidates for a graduate degree. Applicants must submit the following to the Office of Graduate Admissions: the general application for admission, a \$30 application-processing fee, two official copies of transcripts from each institution attended except the University of Georgia, and two copies of official entrance test scores. Applicants also must submit three letters of recommendation directly to the department to which they are applying, as well as any supplemental information required by the department. Applicants are responsible for contacting the department graduate coordinator for information on any special requirements and any supplemental materials which may be needed.

Applicants upon whom some condition has been placed by the major department and/or the Graduate School may be admitted provisionally to a degree program if recommended by the department and approved by the graduate dean. Applicants for the

Specialist in Education degree are not eligible for provisional admission.

(2) *Nondegree (ND).* Applicants who do not intend to pursue a degree but who wish to take courses for professional advancement, licensure, or certification purposes, and who hold a baccalaureate degree or higher degree from a regionally accredited institution, should apply for nondegree status. Applicants must submit the following to the Office of Graduate Admissions: the general application for admission, a \$30 application-processing fee, two official copies of transcripts from the institution which awarded the highest degree, and a statement of purpose. The statement of purpose should be completed in the space provided on the reverse side of the general application. Applicants are responsible for contacting the department graduate coordinator for information about any special requirements or supplemental materials which may be needed.

Nondegree students who are later admitted as prospective degree candidates may apply a maximum of nine hours of course work taken in the nondegree status toward a graduate degree program. The inclusion of such course work on a program of study is subject to approval of the major professor, the department graduate coordinator, and the dean of the Graduate School. Courses taken in the nondegree status may not be included on a program of study for the Specialist in Education degree.

(3) *Graduate Transient (TRANS).* Transient admission may be granted to students in good standing at regionally accredited graduate schools who wish to enroll for one semester at the University of Georgia. Applicants requesting this status must submit the following to the Office of Graduate Admissions: general application for admission, \$30 application-processing fee, and certification of graduate standing in a regionally accredited institution. Additional information may be required by departments for admission to this classification; therefore, applicants should contact the appropriate department. Students admitted in this classification who later wish to enroll as prospective candidates for a degree must

make formal application to the Graduate School.

IRREGULAR STUDENTS

A student registered in the University as an irregular student cannot register for graduate courses. Course work taken in this classification cannot be counted for credit toward any graduate degree.

COMBINED DEGREE PROGRAMS

The Graduate School offers certain combined degrees with other schools and colleges in the University.

Selected students in the College of Arts and Sciences may be eligible for completion of combined AB and MA or BS and MS programs in a four-year period. Students in the College may also be allowed to complete AB and MBA or BS and MBA programs in five years. Students interested in these degree objectives should contact the University Honors Program.

Certain students in the College of Arts and Sciences or the College of Journalism and Mass Communication may be allowed to complete AB and MBA, or BS and MBA, or ABJ and MBA degrees in five years. Interested students should contact the appropriate school or college and the University Honors Program.

Certain students in the College of Family and Consumer Sciences may be eligible to pursue the combined degrees of BSHE and MBA. In the College of Journalism and Mass Communication, students may be allowed to pursue combined programs leading to the ABJ and MBA degrees. In the Terry College of Business, students may be eligible to pursue combined programs leading to the BBA and MAcc degrees. All these combined degree programs are designed to be completed in five years.

Students interested in the JD and MBA or JD and MAcc four-year combined degree programs should contact the School of Law and the Terry College of Business.

Selected pharmacy students may enter a combined degree program in which they receive the BS degree in pharmacy at the end of their third professional year and the MS

degree in pharmacy at the end of one additional year.

ENROLLMENT IN GRADUATE COURSES—LAW/UNDERGRADUATE STUDENTS

Students enrolled in the School of Law, who hold a baccalaureate degree from an accredited university/college and who are in good standing, may enroll in graduate courses with approval of their advisor and the dean of the Graduate School. An approval form may be obtained in the School of Law.

Undergraduate students, participating in the Honors Program and who are in good standing, may register for graduate courses with approval of their advisor and the dean of the Graduate School. An approval form may be obtained in the Honors Program Office.

Undergraduate students, having received prior approval, may enroll for up to six semester hours of credit to be included in a graduate program of study if they are within three hours of completing requirements for the undergraduate degree. They may enroll for three hours of such credit if they are within six hours of completing degree requirements. This credit must be in 4000- or 5000-numbered courses which also have 6000 or 7000 listings. If work in the 4000- or 5000-numbered courses is satisfactory credit at the graduate level will be granted after admission and registration in the Graduate School of the University of Georgia. A form to request prior approval may be obtained in the Graduate School.

COURSE NUMBERS AND LOAD

Courses numbered 8000 and 9000, taught by members of the graduate faculty, are advanced graduate courses and seminars that provide educational experiences at the highest level in a graduate student's program of study. Courses numbered 6000 are fundamental knowledge courses; those numbered 7000, except thesis 7300, are technique and professional courses. Courses numbered 6000 and 7000 are normally taken early in the graduate student's program.

of study. Joint undergraduate/graduate courses, numbered 4000/6000 and 5000/7000, in which undergraduate and graduate students are mixed, are not normally used to provide the core requirements of a graduate degree program. Such courses may be used as electives and as service courses taken in other departments.

A full course load for a graduate student is nine hours per semester during the academic year and six hours during the summer session. A student who holds an assistantship that requires from one-fourth to one-third time service must register for a minimum of nine hours each semester. A student who holds an assistantship that requires four-ninths to one-half time service must register for a minimum of six hours each semester. A student enrolling for over 15 hours per semester must receive approval from the Graduate School. Any graduate student using University facilities and/or staff time must register for at least three hours each semester. A student must be registered for a minimum of three hours of credit the semester in which degree requirements are completed.

PROBATION AND DISMISSAL

Students may be dismissed by their department at the end of any semester if they have not made sufficient academic progress to warrant continuance of study. Termination of students will follow policies and procedures adopted by the department. Dismissal by an academic department may be appealed to the dean of the Graduate School after all avenues of appeal have been exhausted at the departmental level. When students are terminated by a department, but not simultaneously by the Graduate School, they may apply for admission to another graduate program if they wish to do so.

Students with a cumulative graduate course average below 3.0 for two consecutive semesters are placed on academic probation by the Graduate School. They then must make a 3.0 or higher graduate average per term each succeeding semester that their overall cumulative graduate average is below 3.0. These students are no longer on

probation when their cumulative graduate average is 3.0 or above. If they make below a 3.0 graduate average per semester while on probation, they are dismissed. When students repeat a graduate course, the last grade will be utilized to calculate the cumulative graduate average that is used for probation and dismissal. Grades of S, U, I, and V will not be used in calculating the cumulative graduate average. When students are dismissed under the terms of this policy, they may not apply for admission to another graduate program offered by the University. Students who are dismissed by the Graduate School for academic reasons may appeal the dismissal to the dean of the Graduate School. The appeal must be submitted within 10 working days following receipt of notice of dismissal. Information concerning the appeal process may be obtained in the Graduate School.

Degrees Offered

The degrees offered by the Graduate School are listed below. For specific requirements see the *Graduate School Bulletin*.

GENERAL DEGREES

Master of Arts

The Master of Arts degree will be conferred upon candidates who have met prescribed requirements, with major study in one of the following fields: anthropology, art history, business administration, classics, comparative literature, economics, education, English, French, geography, German, Greek, history, journalism, Latin, linguistics, mathematics, mathematics non-thesis, music, philosophy, political science, religion, Romance languages, sociology, Spanish, and speech communication.

Master of Science

The Master of Science degree will be conferred upon candidates who have met prescribed requirements, with major study in one of the following fields: agricultural economics; agricultural engineering; agronomy; anatomy (veterinary); animal science; artificial intelligence; biochemistry

and molecular biology; botany; cellular biology; chemistry; child and family development; computer science; conservation ecology and sustainable development; dairy science; ecology; entomology; environmental economics; environmental health; food science; foods and nutrition; forest resources; genetics; geology; horticulture; housing and consumer economics; marine sciences; medical microbiology; microbiology; pharmacology (veterinary); pharmacy; physics; physiology (veterinary); plant pathology; poultry science; psychology; statistics; textiles, merchandising and interiors; toxicology; veterinary parasitology; and veterinary pathology.

Doctor of Philosophy

The University established this degree for the purpose of providing properly qualified students with the opportunity to pursue research and other scholarly activity beyond the point that is possible in programs for the master's degree. At present, opportunity for such advanced graduate work is provided in adult education, agricultural economics, agronomy, animal and dairy science, animal nutrition, anthropology, art, biochemistry and molecular biology, biological and agricultural engineering, botany, business administration, cellular biology, chemistry, child and family development, communication sciences and disorders, comparative literature, computer science; counseling and student personnel services, counseling psychology, drama, ecology, economics, educational psychology, English, entomology, exercise science, food science, foods and nutrition, forest resources, genetics, geography, geology, health promotion and behavior, higher education, history, horticulture, housing and consumer economics, instructional technology, language education, linguistics, marine sciences; mass communication, mathematics, mathematics education, medical microbiology, microbiology, middle school education, music, pharmacology (veterinary), pharmacy, philosophy, physical education, physics, physiology (veterinary), plant pathology, political science, poultry science, psychology, reading education, Romance languages, science educa-

tion, social science education, social work, sociology, special education, speech communication, statistics, textile sciences, toxicology, veterinary parasitology, and veterinary pathology.

This degree will not be granted upon the completion of any definite amount of work prescribed in advance. It will be granted in recognition of proficiency in research, breadth and soundness of scholarship, and thorough acquaintance with a specific field of knowledge. Evidence of such attainment must be provided through the presentation of an acceptable dissertation based upon independent research and passing of such written and oral examinations as may be prescribed.

PROFESSIONAL DEGREES

Master of Accountancy

This degree program prepares students for careers in public accounting or for executive positions in private accounting. It is open to students who hold a Bachelor of Business Administration degree or its equivalent.

Master of Agricultural Economics

This degree is designed for students who wish to acquire specialized training in agribusiness. The program blends business and economics with the applied science of agriculture, providing methods for solving real-world problems. An internship and technical report are required in lieu of a thesis.

Master of Agricultural Extension

This degree is designed especially for county agricultural extension workers, agricultural educators, and other continuing education professionals engaged in informal educational settings. In addition to the general Graduate School requirements, one year of field experience in agricultural extension, or its equivalent, is required.

Master of Applied Mathematical Science

The Master of Applied Mathematical Science is a terminal degree program designed for students who seek a broad training in applied quantitative methods as preparation for professional employment in

business, government, or industry. For such students, this program will provide a structure that blends various applied mathematical sciences with particular reference to their application to real-world problems.

Master of Art Education

This program is designed to improve the professional competency of teachers and supervisors of art.

Master of Arts for Teachers

Programs leading to the Master of Arts for Teachers degree are designed to prepare teachers for employment in secondary schools and junior colleges. The degree may be earned in English, French, German, Romance languages, and Spanish.

Master of Avian Medicine

This degree is designed to provide veterinarians with specialized training in the diagnosis, treatment, and prevention of poultry diseases.

Master of Business Administration

This program is designed for the student who desires sound training beyond the baccalaureate degree as preparation for a career in business.

Master of Education

This degree is designed for the student whose vocational objectives require preparation for teaching, supervision, and/or first line administration in grades P-12 and other educational or professional agencies. The Master of Education degree may be obtained in the following areas: adult education, agricultural education, business education, communication sciences and disorders, computer-based education, early childhood education, educational leadership, educational psychology, elementary education, English education, exercise science, foreign language education, guidance and counseling, health promotion and behavior, home economics education, human resource and organizational development, instructional technology, marketing education, mathematics education, middle school education, occupational studies, physical education, reading education,

recreation and leisure studies, rehabilitation counseling, safety education, science education, social science education, special education, speech education, student personnel in higher education, and technological studies.

Master of Fine Arts

This program is for students in the creative and performing arts whose professional objectives require advanced skills in art and drama.

Master of Forest Resources

This is a professional program designed to be a terminal degree program for forest resources managers.

Master of Historic Preservation

This program is designed to prepare students for a wide range of careers in the conservation and management of historic resources in both the built and natural environments.

Master of Home Economics

This program prepares students for professional careers in home economics and related professions. This degree may be earned in the areas of child and family development and foods and nutrition.

Master of Landscape Architecture

This program provides advanced training for landscape architects and graduates in related fields.

Master of Laws

The LL.M. program is essentially a fourth year of J.D. studies, affording an opportunity for further study in fields not fully covered in undergraduate law work.

Master of Marketing Research

This degree program is designed to develop marketing research professionals with a solid understanding of business and marketing analyses. The program of study includes 39 semester hours of graduate work, including two semesters of internship, and begins each June. Students without business courses must complete foundation courses before entering the program.

Master of Mass Communication

This program serves those students whose career goals indicate that additional course

work will be more advantageous to them than the completion of the traditional thesis required in the Master of Arts. The additional course work provides an opportunity for more breadth and depth of exposure to areas which may lay the foundations of career development, whether in additional mass communication courses or in cognate courses that tie into professional goals.

Master of Music

This degree offers major concentrations in performance, piano pedagogy, chamber music/accompanying, choral conducting, woodwinds, composition, and music literature.

Master of Music Education

This program prepares students for professional careers in teaching/supervising school music or in music therapy.

Master of Plant Protection and Pest Management

This program is designed to produce graduates with comprehensive, multidisciplinary training in plant pathology, entomology, and weed science for employment by industrial, extension, and regulatory agencies.

Master of Public Administration

Advanced professional training for graduates who plan to work in public administration is provided by this program.

Master of Social Work

This program emphasizes both clinical social work practice and community social policy.

Specialist in Education

This degree is planned for the student who seeks advanced specialized training in a selected area in order to improve teaching, supervisory, and/or administrative skills.

The program for the Specialist in Education degree shall consist of a minimum of 30 semester hours of study at the graduate level beyond the master's degree. The Specialist in Education degree may be obtained in the following areas: adult education, art education, communication sciences and disorders, early childhood education, educational leadership, educational psychology, elementary education,

English education, foreign language education, guidance and counseling, instructional technology, mathematics education, middle school education, music education, occupational studies, physical education, reading education, safety education, school psychology, science education, social science education, special education, and speech education.

Doctor of Education

This degree provides advanced professional training for careers in teaching, administration, and other educational services. At the present time, the degree is offered in the following fields of education: adult education, art education, early childhood education, education of gifted, educational leadership, educational psychology, elementary education, exercise science, higher education, instructional technology, language education, mathematics education, music education, occupational studies, physical education, reading education, recreation and leisure studies, science education, social science education, and special education. Specialization in research skills and in subject fields appropriate to public schools, higher education, and other educational and/or helping agencies is provided.

Doctor of Musical Arts

The program of study leading to the Doctor of Musical Arts degree provides advanced professional, academic, and research preparation for music careers in teaching, performing, composing, and conducting. Major concentrations are offered in music education, performance, composition, and choral conducting. The School of Music should be contacted regarding applied music options available within the performance and conducting areas.

Doctor of Public Administration

The objective of the program is to provide doctoral-level training for several client groups. First, the program will prepare students to serve in executive or upper managerial levels in local, state, and federal jurisdictions. Second, the program will prepare students for a variety of institutional settings that have significant interfaces with

public agencies. These include various institutes, private planning agencies, and consulting organizations. Third, the program will help prepare individuals for specialized research and teaching careers.

PROGRAM FOR TEACHER CERTIFICATION

For Majors in Education

The Georgia State Board of Education is the agency which awards professional certificates. The College of Education has been approved to offer graduate programs designed to qualify students for fifth-year, sixth-year, and seventh-year professional certificates.

For other details and requirements see the *Graduate School Bulletin*.

For Majors in Fields Other Than Education

Candidates for degrees in fields other than education may meet the requirements for a teaching certificate at the fifth-year level. For requirements see the *Graduate School Bulletin*.

GRADUATE CERTIFICATE PROGRAMS

Conservation Ecology and Sustainable Development

The University offers a certificate in conservation ecology and sustainable development through the Institute of Ecology. Any graduate student in a natural science or a social science degree program at the University is eligible to apply. For information, contact the Graduate Coordinator, Institute of Ecology, Ecology Building (706) 542-2958.

Environmental Ethics

The University of Georgia has a Faculty of Environmental Ethics which offers a certificate program at the graduate level. The certificate program contains a variety of courses devoted partially or entirely to issues of value and the environment. For information, contact Dr. Peter Hartel, Department of Crop and Soil Sciences, (706) 542-0898.

Gerontology

The University awards a Certificate in Gerontology to graduate students meeting certain requirements. For information concerning this program, contact Dr. Leonard W. Poon, Director, Gerontology Center, Candler Hall, (706) 542-3954.

Global Policy Studies

The University awards a Certificate in Global Policy Studies to graduate students meeting certain requirements. Students may earn the certificate as a supplement to a regular degree program. For information, contact Dr. William O. Chittick, Center for the Study of Global Issues, Franklin House, (706) 542-6633.

Historic Preservation Studies

The University awards a Certificate in Historic Preservation Studies to graduate students meeting certain requirements. Students are required to complete 18 hours of credit, which includes 9 hours of certificate core requirements with the remaining 9 hours to be selected from the historic preservation curriculum. For additional information contact Professor John C. Waters, Coordinator of Graduate Studies in Historic Preservation, School of Environmental Design, Caldwell Hall, (706) 542-4706.

Marriage and Family Therapy

The University awards a Pre-Professional Certificate in Marriage and Family Therapy to graduate students meeting certain requirements. For information contact the Coordinator of this certificate program, Dr. Arthur Horne, Counseling and Human Development Services, 402 Aderhold Hall, (706) 542-4107.

Women's Studies

A graduate certificate in women's studies is available to those students who either hold a graduate degree or are pursuing one at the University. The purpose of the certificate is to expose students to the rapidly expanding interdisciplinary scholarship on women. For more information contact Dr. Patricia Del Rey, Director of Women's Studies, Room 230K Main Library, (706) 542-2846.

Division of Academic Assistance

233 Milledge Hall, (706) 542-5436
FAX: (706) 542-0476
Homepage URL: <http://www.uga.edu/participants/acada.html>

Contact Person: Dr. Patricia L. Dwinell,
pdwinell@uga.cc.uga.edu, (706) 542-0480

The Division of Academic Assistance offers educational opportunities for students to develop academic competencies to enhance their probability of success in higher education. The Division provides educational experiences in reading and study strategies, English, mathematics, and group experiences in academic success strategies and educational planning. The educational and counseling programs allow students to begin at their own ability levels and continue at their own learning rates within the time limits established by the University.

Student Placement

All entering freshman students are required to take University placement tests. Performance on University placement tests determines students' placement in Academic Assistance courses, introductory core courses, or advanced level courses. Entering freshman students whose SAT recentered scores are below 430V and/or 400M and whose scores on the Collegiate Placement Examinations are below 75 are classified as Developmental Studies students. Students who are not required to take Academic Assistance courses may elect to take or audit any Academic Assistance course.

Developmental Studies students and students who are mandated by the institution to enroll in Academic Assistance courses are required to follow University of Georgia and Board of Regents guidelines. Students who are required to complete Academic Assistance courses advance to degree-credit courses by achieving a C grade or above in 0098 or 0099 level courses. Students classified as Developmental Studies students must fulfill the above grade criteria and also achieve a score of 75 or above on

the appropriate Collegiate Placement Examination(s). Students who are required to take Academic Assistance courses are allowed a maximum of 12 semester hours or three attempts, whichever occurs first, to complete an area (English, mathematics, reading, and counseling). If after 12 hours or three attempts in any course area students have not met the criteria for completion, they are suspended from the University.

Developmental Studies students may not accumulate more than 20 semester hours of college-level credit before completing all Developmental Studies requirements. Developmental Studies students who accumulate 20 hours of college-level credit and have not successfully completed requirements may enroll only in Developmental Studies courses until such requirements are met. Students required by the University to enroll in Academic Assistance courses must satisfy all requirements by the time the student has earned 20 semester hours or the student must enroll in course work that will satisfy the requirements every term of enrollment until the requirements are satisfied.

Students must complete all University placement tests before enrolling in Independent Study courses. A required course in an Academic Assistance area must be satisfied before students may register for an Independent Study course in that area.

Academic Assistance Curriculum

Based upon performance on University placement tests, students may be required to take Academic Assistance courses in some or all areas: counseling (ACAC), English (ACAE), mathematics (ACAM), and reading (ACAR). Academic Assistance courses carry institutional credit that does not count toward graduation. Students who are mandated to take courses from only one or two program areas may take courses from the University curriculum that do not require the content or skills of the mandated Academic Assistance course(s).

COUNSELING

The goal of the counseling courses is to promote the development of personal, social, and career exploration skills which facilitate success and achievement in a university setting. Each academic term faculty offer a series of Academic Assistance Workshops, each of which is devoted to one specific topic (e.g., learning styles). The program also offers Academic Assistance courses designed to provide students with a better understanding of their personal abilities, interests, and competencies and to ascertain how these aspects of one's self can enhance or hinder academic performance.

ENGLISH

The objective of the English courses is to prepare students for the kinds of writing required in English 1101 and other University courses. To meet that objective, Academic Assistance English courses stress invention strategies for generating ideas and improving writing fluency, conventions of academic usage and style, patterns for organizing thought and arranging written material, and critical thinking and analysis. In the classroom and in individualized instruction, students receive extensive practice drafting, editing, and revising expository and persuasive essays.

MATHEMATICS

The goals of the mathematics courses are to develop and strengthen the mathematics skills of students so that they can be successful in their entry-level mathematics courses and other courses requiring elementary mathematics reasoning; and to develop and strengthen the thinking, reasoning, problem-solving skills, and study strategies of students. The program offers mathematics courses in elementary and intermediate algebra.

ACADEMIC STUDYING AND READING

The goal of the reading courses is to encourage autonomous learning by increasing reading proficiency and by teaching students reading and study strategies

prerequisite for success in University courses. Instruction and practice are given in reading comprehension, general study strategies, vocabulary development, and test preparation techniques. Instruction is linked to University reading demands, and courses incorporate applications to university-level texts, novels, and supplementary materials.

UNIV COURSES

The Division of Academic Assistance offers UNIV courses as electives, which carry up to 3 hours of institutional credit. UNIV courses count toward the cumulative GPA.

Academic Learning Center

The Academic Learning Center provides individual and small group academic assistance. Center personnel offer assistance in writing, mathematics, reading, and study strategies. Counseling personnel offer individual and small group experiences in a variety of developmental areas.

University Tutorial Services

The University Tutorial Services provides one-to-one or small group tutorial assistance to students free of charge. Trained undergraduate and graduate peer tutors offer assistance in many undergraduate level core courses, including mathematics, chemistry, biology, physics, English, Spanish, French, German, and business. Appointments and drop-in services are available.

Courses of Instruction

See page 303. Courses offered under the Division of Academic Assistance are listed under the following prefixes:

ACAC	Academic Assistance Counseling
ACAE	Academic Assistance English
ACAM	Academic Assistance Mathematics
ACAR	Academic Assistance Reading
UNIV	University Orientation

Division of the Armed Services

The Division of the Armed Services consists of the Department of Military Science and the Department of Aerospace Studies. The Reserve Officer Training Corps programs are designed to develop leadership qualities and to give students an understanding of the Armed Forces and how they support the national policies and interests of the United States. In particular, ROTC programs are charged with the mission of commissioning second lieutenants who have the qualities, attributes, and educational credentials essential for service as junior officers in the Army or Air Force.

Department of Aerospace Studies

Hardman Hall, (706) 542-1751

Homepage URL: <http://www.uga.edu/~afrotc/title.html>

Email: AFROTC@arches.uga.edu

Air Force ROTC offers male and female students a course of study designed to complement their individual academic major. Aerospace Studies courses are available to all UGA students. Upper division courses, AIRS 3000 and AIRS 4000 series, require permission of the department. Students enrolled in the program represent a broad cross section of the UGA student body. Enrollment in either the two-year or the four-year program offers each student an additional future career option. The student has an opportunity to explore and evaluate Air Force career opportunities while earning a college degree. Completion of the AFROTC curriculum is the initial step in the education of the professional officer and provides a firm understanding of aerospace concepts, the Air Force mission, organization, and operation. Students who complete officer candidacy requirements are commissioned when they receive a bachelor's degree. Newly commissioned officers may be granted a delay in entering active duty for the purpose of seeking advanced degrees.

GENERAL PROGRAM (GMC and POC)

The Air Force ROTC program consists of two phases: the General Military Course (GMC) and the Professional Officer Course (POC); each phase requires four semesters of study on campus. The GMC materials deal primarily with the various Air Force organizations and their missions, as well as the history of the Air Force. GMC courses meet for three hours each week, including two hours of Leadership Lab. The POC materials emphasize student involvement in learning and practicing management and leadership techniques; the senior year course also deals extensively with the political, economic and social factors relating to the formulation and implementation of national security policy. Communicative skills are stressed throughout the entire AFROTC curriculum. The junior and senior cadets meet for five hours each week, including two hours of Leadership Lab. Completion of the GMC is not necessarily required for entry into the POC. Transfer students and other students unable to participate in the on-campus GMC may substitute a six-week field training period for the GMC course. Veterans can be awarded full credit for the freshman and sophomore courses based on their active military experience. **Application for the six-week field training session must be accomplished by January 10 preceding the fall semester in which the student becomes a junior.**

Air Force ROTC field training is offered during the summer months at selected Air Force bases throughout the United States. Students in the four-year program participate in four weeks of field training, usually between their sophomore and junior years. Students applying for entry into the two-year program must successfully complete six weeks of field training prior to enrollment in the Professional Officer Course. The major areas of study in the four-week field training program include junior

officer training, aircraft orientation, career orientation, survival training, base functions and Air Force environment, and physical training. The major areas of study included in the six-week field training program are essentially the same as those conducted at four-week field training and in the General Military Course including Leadership Laboratory.

WOMEN CADETS

Air Force ROTC offers its full range of programs to women cadets. Women cadets are eligible to compete for AFROTC college scholarships, and they receive the same benefits as their male counterparts. A commission as an officer (second lieutenant) is tendered at the time the University grants the bachelor's degree to those completing the POC.

PLACEMENT CREDIT

Students who have completed ROTC courses in essentially military preparatory schools or junior colleges may be given appropriate credit. Students who have taken high school ROTC should contact the professor of aerospace studies for placement. Individuals with prior service may also be given placement credit.

SELECTION FOR THE PROFESSIONAL OFFICER COURSE (POC)

Selection for the POC is based on interest in the Air Force together with achievement records of academic ability, observed leadership traits, and the results of a mental officer qualification test and physical examination. Selection into the program is on a competitive basis and all application criteria must be accomplished **prior** to the 1 March deadline.

PAY

When attending either field training course, students are furnished transportation or payment for travel plus pay at the current rate of approximately \$375 per month. They are furnished all uniforms and receive free medical and dental care while at field training. A nontaxable allowance of \$150

per month during two academic years is paid to all POC and scholarship cadets. This fee is in addition to any other scholarship benefits held by students.

SCHOLARSHIPS

The College Scholarship Program (CSP) is available to selected four, three, and two-year students participating in AFROTC programs. This scholarship consists of payment of tuition fees, book reimbursement allowance, and the monthly allowance of \$150 mentioned above, for each scholarship year. Scholarship consideration is predicated on student ability, performance and potential. Special scholarships are available for minority students and for selected technical and non-technical majors. Minimum GPA for application ranges between 2.35 and 3.65, depending on the type of scholarship.

FLIGHT SCREENING PROGRAM

Pilot and navigator candidates are selected during their junior year. These competitive slots are open to all physically qualified male and female students. Eyesight requirement for pilots is 20/50 and 20/200 for navigator candidates.

Pilot candidates will attend a US Air Force-sponsored Light Aircraft Training Program following graduation. This program consists of approximately 21 hours of dual flying and 30 minutes solo flying time in a light single-engine aircraft. The purpose of the Light Aircraft Training Program is to screen those pilot candidates who have the necessary aptitude and attitude for formal USAF undergraduate pilot training.

LEADERSHIP LABORATORY

Leadership Laboratory is taken an average of two hours per week throughout the student's enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior

officer. Students develop their leadership potential in a practical, supervised laboratory, which typically includes visits to Air Force installations and orientation flights.

STUDENT OBLIGATIONS

When entering the professional officer course, a student must have at least two full academic years remaining to complete his/her college requirements for an undergraduate or graduate degree or a combination of the two. Each POC student is required to enlist in the Air Force Reserve and to execute a written contract with the government. This contract requires a student to complete the POC and to accept a commission as a second lieutenant if tendered. The initial commitment for serving in the Air Force is four years. GMC students do not incur a commitment unless they are on scholarship.

AIR FORCE ROTC UNIFORMS

Uniforms will be issued at no charge to all AFROTC students taking Aerospace Studies classes. After uniform issue, if Aerospace Studies classes are dropped prior to commissioning, uniforms must be returned. Upon commissioning, students may purchase their uniforms for 50% of cost.

Courses of Instruction

See page 303. Courses offered through the Department of Aerospace Studies are listed under the prefix AIRS.

Army ROTC Department of Military Science

Military Building, (706) 542-2612

FAX: (706) 542-0565

Homepage URL: <http://www.uga.edu/~army/>

Email: goldbar@arotc.uga.edu

The Army ROTC program at the University of Georgia has been commissioning officers in Athens for more than seventy years. It is a long, proud tradition which we are continuing. Currently, more than 150 students are enrolled in Army ROTC at the University.

Army ROTC provides college men and women an opportunity to receive training in basic military skills. Through study and application of the principles of leadership and management, the Army ROTC student develops self-discipline, self-confidence, and leadership skills that will contribute to success in any career.

The Army has a career field to match a student's education and interests with no restrictions on the major field of study or discipline. Army ROTC classes are unique in the college curriculum in offering both instruction and the opportunity to develop leadership. The student who takes Army ROTC may enter after graduation such diverse fields as aviation, engineering, law enforcement, medical services, combat command, communications, finance, management, personnel administration, transportation, and research and development.

BASIC COURSE

The Basic Course is taken during the freshman and sophomore years. The courses cover military skills. There is no military commitment for taking a Basic Course class. The Basic Course of four semesters' duration consists of one hour of classroom work and one hour of leadership laboratory per week. Classes are taken in conjunction with the standard classes a student schedules each semester. The leadership laboratories are often conducted outdoors and may include field trips. In the classroom the student acquires knowledge of basic military skills, military organization, weapons, tactics, history and customs, first aid, foreign doctrines, and basic management techniques. In the field, leadership skills are progressively developed through experience and exposure to leadership situations. Equally important, these courses have the objective of developing the student's leadership, self-discipline, integrity, and sense of responsibility.

ADVANCED COURSE

The Advanced Course consists of three classroom hours and two leadership laboratory hours per week during both the

third and the fourth years. The course work during the Advanced Course emphasizes techniques of management and leadership and the fundamentals and dynamics of the military team. The leadership laboratory provides the student with applied leadership experience. The general objective of this course of instruction is to produce junior officers who by education, training, attitude, and inherent qualities are suitable for continued development as officers in the Army. There are four avenues available for the student to become eligible for entry into the advanced program and obtain a commission as a second lieutenant:

- (a) satisfactory completion of, or placement credit for, the basic program at the University of Georgia or at any other school, college, or university offering basic ROTC and meeting the entrance and retention requirements established by the Army.
- (b) be an active duty veteran or junior ROTC cadet graduate eligible for placement credit.
- (c) satisfactory completion of the six-week ROTC Basic Camp at Fort Knox, Kentucky, during the summer following the sophomore year. (See Two-Year Program.)
- (d) completion of Basic/Advanced Individual Training with the National Guard or U.S. Army Reserve.

Advanced Course graduates are commissioned as second lieutenants and serve in the Active Army, the Army Reserve or the National Guard. Graduates may be granted a delay in reporting for active duty to pursue graduate studies. Each year one-third of our graduates are designated as distinguished military graduates and are eligible for Immediate Active Duty Commissions. A few of these distinguished graduates are awarded fellowships that allow these officers to attend graduate school while receiving full pay and allowances as officers.

PROFESSIONAL MILITARY EDUCATION COMPONENT

The professional military education component consists of two essential parts—a

baccalaureate degree and successful completion of one of the undergraduate courses from each of the three designated fields of study listed below.

1. Written Communication Skills

- a. Requirement: Develop the ability to communicate effectively in writing.
- b. Recommended courses: ENGL 1101 and 1102, English Composition, are required for all undergraduate degrees at the University of Georgia.

2. Military History

- a. Requirement: Become acquainted with the evolution of warfare, military theory, and the military profession, with particular emphasis on the place of military institutions in society, to develop a sense of military history.
- b. Recommended courses: HIST 3020, United States Foreign Relations since 1914; HIST 3751, War and Society to 1600; HIST 3752, War and Society Since 1500; HIST 4072, The Civil War Period of American History; HIST 4092, The United States in the Era of the Cold War; HIST 4220, The United States and Latin America; HIST 4391, The French Revolution and the First Empire; HIST 4400, The Age of World Wars I and II; HIST 4700, Themes in Comparative History; and HIST 4990, Senior Seminar in History.

3. Computer Literacy

- a. Requirement: Become familiar with personal computer terminology, hardware, and application software to include word processing and the MSDOS system.
- b. Recommended courses: CSCI 1101-1101L, Introduction to Personal Computing; MGMT 2090, 2090L, Introduction to Information Systems in Business.

Any deviation from the above requirements must be approved after counsel with the Professor of Military Science.

ADVANCED PLACEMENT

Veterans entering the military science program may receive credit for the first two years of ROTC. Students who have completed military science courses in

military preparatory schools or junior colleges may also be given appropriate credit.

FINANCIAL ASSISTANCE

All cadets in the advanced program earn approximately \$1350 per year in nontaxable allowances. Non-scholarship cadets can earn as much as \$16,500 during their four years of college by being in both the Georgia National Guard or the United States Army Reserve and Army ROTC Simultaneous Membership Program (SMP).

SCHOLARSHIPS

Three-year and two-year Army ROTC scholarships are awarded on a competitive basis. More than 50% of our advanced course students are on scholarship. Freshmen apply for three-year scholarships and sophomores apply for two-year scholarships in January each year. Individuals interested in applying for a scholarship should contact the Professor of Military Science at the University of Georgia. Four-year scholarships are available to high school seniors.

TWO-YEAR PROGRAM

Transfer Students

Students transferring to the University with two years of college remaining, but who have not completed all basic course requirements, can still participate in the advanced course. These students must attend a six-week summer camp prior to entering the advanced program. Students attend camp at Fort Knox, Kentucky, and are paid \$700, provided free room and board and a travel allowance to and from camp. Students who intend to enroll in the two-year program should contact the Professor of Military Science by February of their sophomore year.

PROFESSIONAL ACTIVITIES

There are two extracurricular organizations that supplement instruction offered in the classroom. Pershing Rifles Company and Ranger Company improve the student's

military skills and offer additional leadership opportunities. There is also the Color Guard, and the Scabbard and Blade Honor Society.

FIELD TRIPS

The battalion conducts one weekend field trip each semester. Previous weekend activities have included mountaineering, weapons qualification, tactics, and land navigation.

ARMY SPECIALTY TRAINING

Selected students attend the United States Army Airborne, Air Assault, and Northern Warfare schools during the summer on a voluntary basis.

CAREER OPPORTUNITIES

Our graduates earn approximately \$25,000 a year to start. This amount rises to approximately \$41,000 after four years of active duty.

ARMY ROTC UNIFORMS, BOOKS AND SUPPLIES

Students enrolling in the Army ROTC program will be issued all books and materials needed in their ROTC classes. Scholarship students, advanced course students, and extracurricular activity members are issued uniforms. Others are issued uniforms and equipment as needed.

FURTHER INFORMATION

For further information contact the Professor of Military Science by calling (706) 542-2612 or by visiting the Military Building on campus at the corner of Baldwin and Sanford Streets.

Courses of Instruction

See page 303. Courses offered through the Department of Military Science are listed under the prefix MILS.

Student Information

Student Services and Activities

Student Affairs

The University of Georgia and the Division of Student Affairs assume that students are responsible for their conduct, their participation in the educational opportunities of the University, and the control of their private lives. Institutional policies, regulations, procedures, programs, and services reflect this attitude and philosophy. The Division of Student Affairs of the University of Georgia provides services and programs that help students adjust to, understand, evaluate, and utilize available academic resources; plan, prepare for, and pursue their life work; learn to know, live with, appreciate, and enjoy others in harmony and with fulfillment and mutual respect; and maintain mental and physical health and strength as they integrate personal, professional, and social values.

Office of the Vice President for Student Affairs

The Office of the Vice President for Student Affairs is a focal point for student concerns in an effort to make the educational experience as meaningful as possible. Staff members work to maintain and improve communications and cooperation among students, faculty, and administrators and offer students general advisement, referrals, and information. Leadership, coordination, and budgetary supervision for the Division of Student Affairs are provided by the Vice President.

The Division of Student Affairs provides many programs and services designed to enhance a student's educational experience at the University of Georgia. Departmental staff members work directly with students and other members of the University community to make these services available. The Vice President for Student Affairs has administrative responsibility for twelve departments: Admissions, Career Planning and Placement, Counseling and Testing, Health Service, Housing, Recreational Sports, Registrar, Student Activities, Student Financial Aid, and Student Information Systems.

The Office of the Vice President for Student Affairs collaborates with the College of Education in the training of graduate students and is the liaison between the Campus Ministry Association and the University community. The Office of Disability Services, the Student Affairs Development Program, and the National Student Exchange Program are administered through this office, (706) 542-3564.

CAMPUS MINISTRY ASSOCIATION

Students may participate in the religious programs of Athens churches and in student organizations sponsored by all major faiths, denominations, and inter/non-denominational organizations. Many of these maintain student religious centers and are members of the Campus Ministry Association. These include: Baptist Student Union, Bulldog Christian Fellowship, Campus Crusade for Christ, Catholic Center, Chi Alpha Christian Fellowship, Christian Campus Fellowship, The Church of Jesus Christ

of Latter-Day Saints' Institute of Religion, Episcopal University Center, Georgia Christian Student Center, Hillel Foundation (Jewish Center), Lutheran Chapel, Methodist Center (Wesley Foundation), Presbyterian Center, Unitarian-Universalist Campus Ministry, and Worldwide Discipleship Association. Religious Affairs Liaison: 201 Academic Building, (706) 542-3564.

OFFICE OF DISABILITY SERVICES

The mission of the Office of Disability Services (ODS) is to create an accessible academic, social, and physical environment for students with disabilities at the University of Georgia. ODS seeks to eliminate attitudinal barriers that exist on campus and serves as an advocate for students with disabilities. ODS also encourages students to develop independence and responsibility as they participate in university life.

ODS provides services to students who have either a physical or mental impairment which substantially limits one or more major life activities, i.e., ADD/ADHD, cerebral palsy, hearing impairments, psychological disorders, quadriplegia, acquired brain injuries, cardiac disease, deafness and blindness. To qualify for services, students must have a verifiable disability by providing current documentation from a qualified health professional.

ODS provides a variety of academic and support services to ensure equal access to University programs and activities. ODS also provides assistive devices and state-of-the-art adaptive computer equipment specifically designed for people with disabilities.

Centrally located on the first floor of Clark Howell Hall, ODS is open Monday-Friday from 8 a.m. to 5 p.m. For more information, call (706) 542-8719 or visit our web site at: <http://iris.dissvcs.uga.edu/~web/>.

NATIONAL STUDENT EXCHANGE

The University of Georgia belongs to the National Student Exchange Consortium, which provides exchanges for students to over 100 public colleges and universities throughout the United States and its

territories. Students on NSE exchange attend the host campus for one quarter/semester up to a full academic year, while paying UGA tuition and fees. There are only a few eligibility requirements, and the deadline for applying for the next year is the first of March. NSE encourages students to experience new life and learning styles, appreciate differing cultural perspectives, learn more about themselves and others, and broaden their educational background through specialized courses or unique programs that may not be available on the home campus. For more information, contact the Office of Student Affairs, 201 Academic Building, (706) 542-3564.

Admissions and Orientation (Undergraduate)

The Admissions Office processes and reviews applications for undergraduate freshman and transfer admission and readmission. This office conducts daily admissions information sessions for prospective students and coordinates recruitment and orientation programs for all new undergraduate students. The office is also responsible for the evaluation and recording of all transfer credit. Admissions staff members are available to discuss general transfer credit issues with currently enrolled students. For more information, see the Admissions section of this Bulletin or contact the Admissions Office, 212 Terrell Hall, (706) 542-2112.

Career Planning and Placement Center

The Career Planning and Placement Center assists UGA students, including postdoctoral candidates, alumni, faculty, and staff in developing their full career potential through planning and appropriate work experiences. Specifically, the Center assists students seeking part-time and summer employment; assists students and others wanting to learn

more about careers and career change; teaches skills necessary in today's competitive job market; provides cooperative education, internships, and other experiential education opportunities; and assists graduating students and alumni who are seeking full-time employment or entrance into graduate or professional school.

Although not an employment agency, the Center helps develop tools required for an effective job search, including interview skills and sound search strategies. In addition, students may conduct interviews in the Center with representatives of employing organizations. Opportunities for suitable employment are often referred to the attention of students and alumni. Because the Center is a conduit between the campus and the world of work, it can advise candidates about employment trends and current opportunities.

To gain maximum benefit, students, alumni, and others should familiarize themselves with, and use, the wide variety of services offered by the Career Planning and Placement Center. Students should contact the Center very early in their university careers.

CAREER PLANNING

To assist students, alumni, and other interested parties, individual appointments may be scheduled for assistance in the career planning process. Many seminars are conducted daily covering general and specific job search topics. In addition to the regularly scheduled seminars, outreach programs are available for presentation for classes, organization meetings, and the like. Special Career Day programs are sponsored throughout the year for students in all majors and all levels—freshmen through alumni.

CAREER PLANNING COURSE (ECHD 3050)

Students may register for a credit course, ECHD 3050, Career and Life Planning, any semester they are enrolled. This one- to three-hour academic credit course provides opportunities for students to identify

interests, needs, and abilities; to observe work activities; and to develop job-hunting skills.

CAREER INFORMATION LIBRARY

An important part of career planning is having access to information about careers. The materials found in the Center's Career Information Library will provide an excellent base of knowledge for students and alumni seeking this critical information. This information is available during regular business hours, and with special permission, may be checked out for overnight use.

COOPERATIVE EDUCATION/ INTERNSHIPS

Cooperative Education (Co-op) is a structured educational plan alternating or combining periods of work with periods of academic study. An internship provides a one-time (usually one semester) opportunity for a student to utilize his or her academic training in a work setting. Both programs offer students an opportunity to gain practical work experience. These experiences also help students clarify career goals as they relate to academic endeavors.

STUDENT EMPLOYMENT

Frequently students, or spouses, need to secure employment while in school or during their stay in Athens. With this in mind, the Center provides Student Employment service. A number of local employers list part-time job opportunities with the Center. In addition, a number of employers list opportunities for seasonal and/or summer employment. This service is available all year round. Students and spouses may use this service by visiting the Center. No appointment is necessary.

CAREER PLACEMENT

This service assists all students who are seeking suitable employment as the completion of their academic program draws near. For students to realize the full benefit of this service, they should register and begin the process at least twelve months

prior to the month in which they will receive their degree. On-campus interviewing with employers from business, industry, education, government, and non-profit organizations is available, as well as resume referrals, mock interviews, and job vacancy announcements. Students are encouraged to participate in all special efforts by the Center. Clark Howell Hall, (706) 542-3375

Counseling and Testing Center

The Counseling and Testing Center, located in Clark Howell Hall, provides a wide range of assistance designed to help students adjust to and succeed in the University environment. Available services include Career Exploration Services, Personal Counseling Services (individual, couples, and group counseling), Outreach and Consultation Services, and Testing Services.

CAREER EXPLORATION SERVICES

The Center offers a variety of services to students who are unsure about their academic major/career choice or who desire more specific information about career opportunities. To receive career services, students must attend a Career Orientation Seminar (COS) or a Choosing a Major (CAM) workshop, which focus on introducing students to the career decision-making process and matching students with services most appropriate for their needs. Resources that are available to students include the Career Information Center, which contains current information about academic majors and careers, and SIGI-PLUS, an individualized computer program designed to help individuals in making career choices. Additional career services include interest and personality testing (with small group interpretations) and individual career counseling.

PERSONAL COUNSELING SERVICES

The Counseling and Testing Center offers group and individual counseling for students who may be experiencing varying types of

concerns related to the changes brought on by the transition to college. All counseling services are provided on a confidential basis.

Individual Counseling: Individual counseling services at the Center are generally offered to currently enrolled students on a short-term basis ranging from a few weeks to a few months, depending on the nature of the student's concern. Self-esteem, stress management, depression, family issues, anxiety, and interpersonal relationships are among the concerns commonly discussed in personal counseling. For longer term or more specialized services, options may include on-campus or off-campus referrals. Students interested in receiving individual counseling are invited to come by the Center for additional information.

Group Counseling: The Center offers a variety of different groups each semester. The groups may assist students in developing interpersonal skills such as assertiveness, stress management, or relationship enhancement. In addition, groups are available for students interested in discussing or gaining support for personal concerns. Topics that this type of group may address include family issues, self-confidence, interpersonal relationships, women's concerns, and minority group concerns. Depending on the topic, groups may meet for a limited number of weeks during the semester or for as long as a full academic year. Each semester, groups are advertised on flyers that are distributed throughout campus and in the *Red and Black*.

OUTREACH AND CONSULTATION SERVICES

Each term the Center offers a number of workshops and programs on topics related to personal growth and development. The "Lunch and Learn," "Relationships," and "Career Quest" series are advertised on flyers distributed throughout campus and in the *Red and Black*. Topics for these programs have included increasing self-esteem, managing stress, communication skills, career issues, maintaining healthy relationships, and interpreting dreams. In

in addition to these scheduled workshops, student organizations, residence halls, classes, and other campus groups can request similar programs at times more convenient to the group's needs. As an additional service, Center staff are available to provide consultation services to campus departments and organizations.

TESTING SERVICES

The Center is responsible for the administration of University-wide testing programs, including the Regents', U.S. and Georgia Constitution and history tests, Orientation testing, proficiency and entrance testing, language placement testing, and Independent Study exams. Hours are limited and appointments are required for some of the testing programs. Test dates and registration instructions for the group administrations of selected programs are provided in the OASIS (schedule of classes) each term. The Center also administers numerous national testing programs such as the GRE, MAT, MCAT, CLEP, LSAT, TOEFL, SAT, and GED. Beginning Fall 1997, Computer Based Testing (CBT) for the GRE and selected other tests will be available at the

Center by appointment. Information and registration packets for national testing programs can be obtained from the lobby of Clark Howell Hall. Further information regarding testing may be obtained by contacting the Center's Testing Information line at 542-TEST (8378).

Students are encouraged to take full advantage of the resources that are offered at the Counseling and Testing Center by visiting the Center, Clark Howell Hall (first floor, south wing), to access available services or by calling 542-3183 for general information; and 542-TEST (8378) for testing information.

University Health Service

Before their arrival on campus, students *must* complete and return to the University Health Service the health history form and the mandatory immunization record form. Students may not register for classes without documentation for the immunization requirements for new students established by the Board of Regents. Students with special problems or handicaps should have their physicians advise the Health



Service of any anticipated needs or medical requests before arrival on campus.

The University Health Service provides primary health care on an outpatient basis to students of the University of Georgia and their spouses. The Health Service is accredited by the Joint Commission on Accreditation of Healthcare Organizations.

During fall and spring terms outpatient care is available on a daily basis. Over the summer term these services are available Monday-Saturday. In general, students are seen on an appointment basis to reduce waiting time. Students with urgent health care problems may be seen on a walk-in basis, or they may call ahead for a same-day appointment.

Outpatient clinics include an acute care clinic, medical clinic, mental health clinic, sports medicine clinic, women's clinic, physical therapy clinic, allergy-immunization clinic, travel clinic, and dental clinic. Pharmacy, laboratory, and x-ray services are available at any time the outpatient clinics are open.

The prepaid student health fee, supplemented by nominal fee-for-service charges, entitles students to a wide range of health care services. A fee-for-service schedule is applicable for student spouses and for students who otherwise may be fee-exempt. The health fee supports an excellent staff of health professionals: physicians, physicians' assistants, nurse practitioners, registered nurses, psychologists, and other health care professionals. The health fees also support a modern health care facility.

Supplemental student insurance is available to provide accident and sickness coverage. This policy has been designed to meet the needs of students and families at a minimum cost. Students may enroll in this plan at the beginning of the school year or at the beginning of each term for the remainder of the year. It is very important that students not covered by parents or other health insurance be enrolled in a supplemental insurance plan.

A health education program (542-8690) is staffed by professionals in the field of health promotion. Educational programs are provided on a variety of health-related

topics. Time is available for private consultation as well as for specific program requests. The health education program encourages healthy choices by increasing health awareness and teaching responsibility for personal health and well-being.

Medical information contained in student medical and mental health records is strictly confidential and may not be released without expressed written permission from the patient or upon court order.

University Health Center, (706) 542-1162.

Housing

RESIDENCE HALLS

General Information

Approximately 6,000 students are housed in 17 residence halls, geographically and administratively divided into two residential areas—the Georgian and the Colonial Residence Halls—on the University of Georgia campus. These residential communities are designed for comfortable living, optimal convenience, and a positive contribution to the educational experience of the residents. Each residence hall features a modern, comfortable environment in which all residents can benefit and take pride. Within each residential area, attractive lounges, computer labs, study and meeting areas, TV rooms, coin-operated laundromats, recreational facilities, and mail facilities are provided. Rooms are furnished with single beds, chests of drawers, desks and chairs, and cable TV and telephone service. Bath facilities are centrally located and shared by students on each floor in most halls. The combination of physical facilities, staff, and student interest contributes to a stimulating environment in University housing.

Through the residence halls, students have an opportunity to participate in social, educational, and recreational programs and activities designed to enhance their personal, scholastic, and social development.

Housing Contract and Application

Applications for residence halls are mailed to freshmen with their official notices of acceptance and to new senior division

students on request. The application and application fee must be returned to the Housing Office in accordance with the accompanying instructions.

The residence hall contract is for the academic year. All students are urged to be familiar with the terms and conditions of the contract prior to signing. Although binding for the fall and spring semesters, provisions are made for mid-year terminations required by academic course programs such as student teaching, internships, and co-ops.

To apply for housing accommodations, applicants must submit an application and a non-refundable \$25 application fee to the Department of University Housing.

Students who decide not to enroll at the University after making application for housing should contact the Housing office to cancel their application.

Housing Assignment

Residence hall assignments are made based on the date the completed housing application and application fee are received in the University Housing Office. Students will receive their academic year contracts and notifications of assignments as early as possible before the semester for which application has been made. A signed residence hall contract, accompanied by the housing payment for the first semester, should be forwarded to the University Housing Office by the date specified on the contract.

Every effort is made to honor hall, roommate, and visitation preferences as space permits. Roommate preference will be honored if both applicants request each other in writing and a double room vacancy exists. Students who do not state a preference for a specific person as a roommate will be assigned a roommate without regard to race, age, color, creed, religion, or national origin.

Opening and Closing of Residence Halls

University residence halls typically open at 10:00 a.m. on the day prior to the first day of registration and close at 10:00 a.m. on the day after the last officially scheduled examination. Non-graduating residents may

remain in the halls at the end of the semester for 12 hours after their last scheduled examination or until 10:00 a.m. on the day after the last officially scheduled examination as per the official University calendar, whichever is earlier. Room accommodations will be provided for graduating seniors until immediately following graduation exercises. During official holidays within a semester and between semester breaks, the University reserves the right to close certain halls and require students electing to remain on campus to move temporarily to another hall.

The regular semester room rent does not include housing rates for housing between semesters. The University reserves the right to charge extra rent when housing is provided during such times and to make changes in fees or other charges at the beginning of any semester without previous notice.

Responsibility for Property

Resident students are held responsible for any damages to their rooms and furnishings. Damages will be assessed by the University and the student billed for repairs or replacements. Students should inform University officials of any damages which exist at the time they occupy their rooms.

Although precaution is taken to maintain adequate security, the University cannot assume responsibility for loss or damage to student possessions. Students or their parents are encouraged to carry appropriate insurance to cover such losses.

FAMILY HOUSING

Applications may be obtained from the Family Housing Office. To qualify as and to continue to be a resident, students must be married, or be single students with one or more dependents occupying the apartment at least 20 days per month. Either husband, wife, or single parent must be registered in a degree program at the University of Georgia, Athens campus, for the semester in which housing is requested. Graduate students must be enrolled for a minimum of 3 hours; undergraduate students for 8 hours. Post doctoral students and faculty members are not eligible for Family Housing until such

time that all full-time student requests are filled (short-term basis only).

Assignments

Assignments are made from a waiting list established according to the date applications are received in the Family Housing Office with a \$25.00 non-refundable application fee.

Information

For residence halls and general information:

Department of University Housing

(706) 542-1421

FAX (706) 542-8595

Russell Hall

The University of Georgia

Athens, Georgia 30602-5575

For on-campus family housing:

Family Housing Office

(706) 542-1473

FAX (706) 542-8402

710 East Campus Road

The University of Georgia

Athens, Georgia 30602-4622

Judicial Programs

The Office of Judicial Programs provides the basis of support for the University's

judicial system, strives to inspire trust and confidence in the University's rules and judicial system, and encourages the incorporation of standards of acceptable behavior into a lasting, individualized value system. In accomplishing this task, the office advises the Student Judiciary and the Defender-Advocate Society. Both organizations help to ensure that violations of University regulations will be adjudicated in a fair and impartial manner.

Furthermore, in order to maximize the positive aspects of defining the limits on acceptable behavior, students charged with violating University conduct regulations are provided individual counseling before and after the adjudication of their case. The staff also provides advice and assistance in the development of written policies designed to govern the day-to-day functions of both the Division of Student Affairs and the University in areas which involve student life.

Any person may file a complaint if he or she feels a University Conduct Regulation has been violated. A student, faculty member, or staff member who has information regarding what may be a regulation infraction should contact the Office of Judicial Programs. The staff will offer advice and give assistance on properly filing a complaint if this becomes necessary.

The Judicial Programs Office also coordinates the student traffic appeal process. For more information, contact Judicial Programs, 300 Academic Building, (706) 542-1131.

REGULATIONS

The University maintains a code of conduct that is printed in the Student Handbook covering individual conduct and student organization activities. A separate brochure outlines traffic and parking regulations. All students are expected to know and observe these rules and regulations. To adjudicate alleged violations of the code of conduct, a University Judicial System was established in 1969. A booklet outlining the procedures followed in disciplinary hearings is available in the Office of Judicial Programs.



Minority Services and Programs

The mission of the Office of Minority Services and Programs is to enhance the university environment by promoting student leadership and academic achievement, to celebrate the contributions and heritage of UGA's diverse student body, and to encourage the full participation of African American, Hispanic American, Asian American, and Caribbean American students, faculty, and staff in campus life.

The office also houses the *African American Cultural Center*, which sponsors a diverse offering of activities emphasizing African and African American culture.

The goals of the Office of Minority Services and Programs are to promote leadership development, resource awareness, academic success, and multiculturalism. The office specifically advises the following student organizations:

The Black Affairs Council (B.A.C.) is an organization dedicated to assisting the University in meeting the needs of the African American student population. The organizational mission is twofold: (1) to identify specific needs, problems, or concerns to the University administration and (2) to develop and implement strategies to address identified needs.

The Pamoja Dancers is an Afrocentric troupe that provides an outlet for non-dance majors to express themselves through dance. Pamoja is open to any interested student. Concerts are held throughout the school year.

The Black Theatrical Ensemble (B.T.E.) is an African-centered theatrical group for students interested in gaining experience and exposure to acting, directing, writing, and production of commercial as well as original plays and vignettes from a Black point of view. B.T.E. is open to any student seeking this form of expression.

Georgia's Black Educational Support Team (B.E.S.T.) assists and orients new and transfer students to campus life. The purpose of this program of peer helpers/friends is to help lessen the stress and strain

of college life. The peer also serves as an information source and referral agent for these students.

The Asian American Student Association (A.A.S.A.) is a group devoted to promoting Asian history and culture on campus and in the community and to assist in the academic success of its members.

The Hispanic Student Association (H.S.A.) sponsors numerous activities to recruit and retain Hispanic students at UGA. H.S.A. also contributes to the University's diversity by hosting an annual Hispanic Awareness Week and co-sponsoring activities with other student groups.

The Caribbean Student Association (CARIBSA) sponsors activities that promote awareness of the history and culture of the Caribbean Islands.

The Indian Cultural Exchange (I.C.E.) is a group dedicated to promoting the rich culture and history of students on campus and in the community whose cultural background is from India by sponsoring various educational programs and events.

To obtain additional information, contact the Office of Minority Services and Programs, 404 Memorial Hall, (706) 542-5773.

Recreational Sports

The University encourages interest in sports by affording students opportunities to be participants and spectators in a variety of intramural sports, outdoor recreation experiences, club sports and informal sports.

The intramural program includes flag football, volleyball, sand volleyball, badminton, basketball, softball, golf, bench press, track, swimming, tennis, indoor soccer, outdoor soccer, and racquetball. The Georgia Outdoor Recreation Program offers backpacking, whitewater rafting, caving, horseback riding, and canoeing experiences, among others.

Club sports are student-run organizations which offer competition and instruction in their particular sport. Currently, students have organized rugby, soccer, Tae Kwon Do, lacrosse, and ultimate frisbee, among others.

Sports and recreation facilities available for student use include the new Ramsey Student Center for Physical Activities (4 gyms, swimming pools, weight training/conditioning room, racquetball and squash courts, multi-purpose and martial arts rooms, indoor track, climbing alcove), 37 acres of playing fields, 22 outdoor and 4 indoor tennis courts, the track, Legion Pool, and the beach and beach house at Lake Herrick. Ramsey Student Center for Physical Activities, 330 River Road, (706) 542-5060.

Registrar

The Office of the Registrar is responsible for registering university students, reporting their grades, and maintaining their permanent academic records. In addition, the office provides a variety of related services to students, academic departments, and other constituents.

The Registration Office, 235 Memorial Hall, (706) 542-6792, assists students, faculty, and staff in the registration process, coordinates departmental scheduling of courses, and publishes the *Schedule of Classes* each semester. The office also maintains the OASIS Registration Help Desk, (706) 542-6911.

The Records Services Office, 105 Academic Building, (706) 542-4040, provides assistance to students with name and address changes, enrollment certifications, schedule adjustments after the drop/add period, and transcript requests. Service Representatives will respond to all in-person and telephone inquiries regarding student-related information as allowed by University, state or federal policies.

Requests for transcripts must be in writing as required by the Family Educational Rights and Privacy Act of 1974. A notice of at least 24 hours is required. Standard request forms are available at the Records Services Office; requests in letter form will also be accepted. All transcripts are \$2.00 each. An additional charge of \$4.00 will be assessed for same-day service. FAXed transcripts are \$6.00 each (\$12.00 for overseas) in addition to the \$2.00 basic

transcript fee. These charges are subject to change without prior notice.

The Data Entry and Processing Office, 106 Academic Building, (706) 542-4055, is responsible for the creation and maintenance of the permanent academic records of enrolled students. In response to information from the deans' offices this office processes class rolls, grade changes, grade reports, and graduation statistics. This office also certifies veterans and qualified dependents for educational benefits.

VETERANS' CERTIFICATION

Veterans eligible for educational benefits and dependents of deceased or 100% disabled veterans eligible for educational benefits may apply for those benefits through the Veterans Education Benefits Office in the Office of the Registrar, 106 Academic Building, (706) 542-8772. To apply for VA educational benefits, veterans must bring a certified copy of their DD-214, and reservists must supply a copy of their Notification of Basic Eligibility, to the Veterans Education Benefits Office.

At the beginning of each term, enrolled veterans or dependents receiving benefits must submit a Veteran's Enrollment Form to the Veterans Education Benefits Office in order to maintain their eligibility for VA educational benefits. Veterans or dependents receiving compensation who withdraw from the University or reduce their academic load are required to report such action promptly to the Veterans Education Benefits Office. For more information, contact the Registrar's Office: 105 Academic Building, (706) 542-4040.

Student Activities

The Department of Student Activities is a programming and service department and offers a wide variety of both to students and student organizations. It maintains files on all registered student organizations and offers programming and financial advisement to club officers. Personnel of the department advise the University Union and its eight program divisions—Committee for Black

Cultural Programs, Cinematic Arts, Visual Arts, Ideas and Issues, Contemporary Concerts, Variety, Performing Arts, and Summer. They also advise the student radio station, WUOG-90.5 FM, the *Pandora* yearbook, Homecoming, fraternities and sororities, College Bowl, Georgia Allies, Leadership Development, Special Programs, and Communiversity—a coordinating agency for student community service projects. The department is responsible for the issuing of student identification cards.

Facilities available through the department in Memorial Hall and the Tate Student Center include a game room featuring table tennis and billiards, student lounges, a ballroom, meeting rooms, and club offices. Activities include pop concerts, films, lectures, debates, panel discussions, and special presentations. Services provided by the Department of Student Activities include van rental, quick copy and full service printing, technical equipment rental, and a computer room. For more information, contact the Department of Student Activities at 325 Tate Student Center, (706) 542-7774, <http://www.uga.edu/~STUACT/>

STUDENT ORGANIZATIONS

A large number of professional and honorary fraternities and sororities, honor societies, advocacy, international, recreational, and service groups exist on the University campus. A detailed listing of over 430 organizations is available from the Department of Student Activities in the Tate Student Center, (706) 542-7774.

STUDENT COMMUNICATIONS

Student communications include the independent student newspaper, *The Red & Black*. The *Pandora* (the yearbook) and WUOG-FM (the student radio station) are administered through the Department of Student Activities Program Office, (706) 542-6396.

SOCIAL FRATERNITIES AND SORORITIES

Fraternities and sororities offer a wide variety of programs and opportunities for their members, including scholarship, leadership, community service, athletics,



and social activities. For more information, contact the Greek Life Office, 216 Memorial Hall, (706) 542-4612.

Fraternities

Alpha Epsilon Pi
Alpha Gamma Rho
Alpha Phi Alpha
Alpha Tau Omega
Beta Theta Pi
Chi Phi
Chi Psi
Kappa Alpha
Kappa Sigma
Lambda Chi Alpha
Omega Psi Phi
Phi Delta Theta
Phi Gamma Delta
Phi Kappa Psi
Phi Kappa Tau
Phi Kappa Theta
Phi Kappa Alpha
Pi Kappa Phi
Sigma Alpha Epsilon
Sigma Chi
Sigma Nu
Sigma Pi
Tau Epsilon Phi
Tau Kappa Epsilon
Theta Chi

Sororities

Alpha Chi Omega
Alpha Delta Pi
Alpha Gamma Delta
Alpha Kappa Alpha
Alpha Omicron Pi
Chi Omega
Delta Delta Delta
Delta Gamma
Delta Phi Epsilon
Delta Sigma Theta
Delta Zeta
Gamma Phi Beta
Kappa Alpha Theta
Kappa Delta
Kappa Kappa Gamma
Phi Mu
Pi Beta Phi
Sigma Delta Tau
Sigma Gamma Rho
Sigma Kappa
Zeta Phi Beta
Zeta Tau Alpha

INTERNATIONAL STUDENT LIFE

The International Student Life Office assists international students at UGA with cross-cultural adjustment, orientation, advising on various personal matters, including initial housing assistance, and cultural programming. The office also works with international student organizations that provide an extended support system for all new international students. International Student Life assists all students at UGA with cross-cultural exposure through cultural programming. Weekly International Coffee Hours, a Speakers Bureau, cross-cultural workshops, and the Community Friend and Global Partners programs offer opportunities for international and American students to learn from each other. For more information, call (706) 542-8187.

Student Financial Aid

Student financial aid is the assistance available to help students meet the difference between what they can afford to pay and what it actually costs to attend the University of Georgia. The amount a student and family can afford to contribute will be determined by the University of Georgia's Office of Student Financial Aid (OSFA), employing a uniform need analysis system in accordance with federal guidelines.

The process of establishing the amount of eligibility for financial assistance for a student is based on two major components: Cost of Attendance (reasonable comprehensive costs for an enrollment period), and Total Family Contribution (as determined by a need analysis system).

AID APPLICATION PROCEDURES

Students begin the aid application process by completing the Free Application for Federal Student Aid (FAFSA). Students who apply for admission receive a letter and postcard from the Office of Student Financial Aid to request packets. Most students who received aid the previous academic year will receive a Renewal FAFSA directly from the Federal government; or they may come by OSFA for a copy. By completing the packet, a student will be considered for federal, state, and institutional aid, including the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Work-Study, HOPE Scholarship, Student Incentive Grant, Federal Direct Loans, and scholarships administered by the Office of Student Financial Aid.

The HOPE Scholarship Program has made an adjustment to its application process. Students whose parents' adjusted gross income was over \$50,000 in 1997 and who do not wish to apply for any other aid through the Office of Student Financial Aid may complete the HOPE Alternate Application (HAA). However, if the parents' adjusted gross income is under \$50,000, or a student would like to have eligibility for other aid programs determined, the FAFSA must be completed.

GENERAL ELIGIBILITY REQUIREMENTS

In general, to be considered for student financial aid, a student must:

- 1) be a United States citizen or eligible non-citizen of the United States; and,
- 2) have been accepted for admission to an approved degree-seeking program or Teacher Certification program by the Office of Undergraduate Admissions or the Office of Graduate Admissions; or be currently enrolled in an approved degree seeking program or Teacher Certification Program (students whose degree program status changes should contact OSFA); and,
- 3) be making progress toward the completion of a course of study according to the "Satisfactory Academic Progress Policy for Student Financial Aid Recipients"; and,
- 4) not be in default on a Guaranteed Student/Federal Stafford Loan, Federal PLUS Loan, Federal Supplemental Loan, National Direct/Defense Student Loan, Federal Perkins Loan, Income Contingent Loan or Federal Consolidation Loan received at any institution; and
- 5) not owe a refund on a Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, or Student Incentive Grant received while attending any institution.

HOW YOUR ESTABLISHED FINANCIAL NEED IS DETERMINED

Your Established Financial Need is the difference between the Cost of Attendance at the University of Georgia and the Total Family Contribution. Your Total Family Contribution is derived from a formula that subtracts the allowances (taxes and FICA paid) from the resources (parents' and student's income and assets, including non-taxable income such as Social Security), and then makes adjustments based on the number of people in the family and the number of family members in college. By subtracting the Total Family Contribution from the cost of attending the University of Georgia, need is established. Federal Work-

Study, Federal Supplemental Educational Opportunity Grant, Student Incentive Grant, Regents' Scholarship, and Subsidized Federal Direct Loan are awarded based on Established Financial Need.

QUALITY ASSURANCE PROGRAM VERIFICATION REQUIREMENTS

The Office of Student Financial Aid participates in the Quality Assurance Program sponsored by the U.S. Department of Education. If you complete the FAFSA and receive Title IV educational funds, you may be selected to verify your application information. If selected, you may be asked to verify, at a minimum, the following: adjusted gross income, federal income taxes paid, untaxed income, household size, and number of family members in college. Failure to provide requested information will result in the cancellation of undisbursed aid.

STUDENT FINANCIAL AID POLICIES

- A. Each year OSFA receives requests for more funds than are available. Although Federal Pell Grant, Federal Direct Loan, and Federal Direct PLUS Loan funds are available to eligible students year-round, other funds awarded by OSFA go to eligible students on a first-come, first-serve basis.
- B. Full-time for undergraduate students is 12 credit hours per semester; half-time is 6 credit hours per semester. Full-time for graduate students is 9 credit hours per semester; half-time is 4.5 credit hours per semester.
- C. Irregular students, non-degree students, transient students, unclassified post-graduate, provisional, and post-baccalaureate students are not eligible for federal or state student financial aid. However, students enrolled in a Teacher Certification program are eligible to apply for a Federal Direct Loan or Federal Direct PLUS Loan. Students must request a "Teacher Certification Form" from OSFA. Teacher certification students must be enrolled at least 6 hours a semester.

- D. Aid is awarded on an academic year basis. Dates to apply for summer aid will be announced by OSFA during the academic year. Students who plan to apply for aid for the first time for a summer semester must mail the FAFSA in time for it to reach the Federal Processor by the 30 June deadline. No aid can be awarded if this deadline is missed.
- E. Only the first 30 attempted hours of non-degree credit course work (including mandatory Academic Assistance) will be allowed in determining aid eligibility. Neither voluntary Academic Assistance nor audits will be considered in determining aid eligibility.
- F. If you complete the FAFSA or Renewal Application, DO NOT submit the Student Aid Report (SAR) you receive to OSFA unless you are making corrections or adding UGA. The Federal Processor will electronically submit your application information to OSFA. This information will be used to determine your eligibility for aid which includes the Federal Pell Grant, Federal Work-Study, Federal Supplemental Educational Opportunity Grant, Federal Direct Loans, Federal Direct PLUS Loan, Student Incentive Grant, HOPE Scholarship, etc.
- G. If you receive a Federal Direct Loan or your parent receives a Federal Direct PLUS Loan, you must maintain at least half-time enrollment *at all times*. Dropping below half-time enrollment at any time will result in subsequent loan disbursements being canceled. If you re-enroll at least half-time, you must contact OSFA to re-apply for the loan(s).
- H. If you enroll in In-Service Education courses, you *may* be eligible to receive aid if you are enrolled in a degree-seeking program. You must obtain a certification letter (available in OSFA) for each course.
- I. Any aid you receive or expect to receive from an outside source must be reported to OSFA, regardless of when you receive notification of the award. This includes scholarships, grants, loans, and assistantships or fee waivers. The receipt of such aid may result in a reduction, cancellation, and/or repayment of your need-based award(s).
- J. If you pre-register for classes, you should note the payment deadline on your fee invoice. Your schedule will be canceled if you do not pay fees by the payment deadline on your fee invoice, or contact the Student Loans, Grants, and Scholarships Department in Business Services if you expected a deferment but do not have one. Pre-registered students who have been awarded student financial aid by the fee deferment date each semester should have a deferment until the first day of class. Students who do not pre-register should contact the Student Loans, Grants, and Scholarships Department in Business Services.
- K. OSFA uses your *permanent* home address on file in the Registrar's Office. You may update this address during registration, or by completing a change of address form in the Registrar's Office in the Academic Building.
- L. OSFA reserves the right, on behalf of the University, to review and cancel awards at any time if you fail to meet the requirements of the Satisfactory Academic Progress Policy for Student Financial Aid Recipients or because of changes in your financial or academic status, academic program, resident status, enrollment status, etc. All student financial aid awards are contingent upon the availability of funds.
- M. Applications for each upcoming academic year are available in January. For priority processing, all required documents must be on file in OSFA by 1 March. Applications not on file by that date will be processed as time and funds permit. OSFA will begin processing completed applications for the academic year as soon as federal regulations are issued. Processing aid applications can take eight weeks or longer during peak processing time. Applications that are not complete by the following deadlines may not be processed by the beginning of that semester: fall, 15 July; spring, 15 November; summer, 15 May. **If you have not completed the application pro-**

cess by the dates given, you should be prepared to pay **all** educational costs.

You should not expect to have student financial aid checks available if you have not returned your signed Award Letter to OSFA AND have not returned a correctly completed Federal Direct Loan Promissory Note to the University by the dates given above.

N. The U.S. Department of Education defines "professional student" as a student enrolled in a course of study beyond a Bachelor's degree; therefore, Bachelor's degree students enrolled in the Bachelor of Pharmacy, Forest Resources, Social Work, and Journalism are not professional students for the purpose of applying for student financial aid. However, PharmD and DVM students are considered professional students.

O. Students applying for Title IV aid as eligible noncitizens and whose citizenship status is not confirmed on their SAR, must provide OSFA with appropriate documentation (Alien Registration Receipt Card—Form I-151 or Form I-551, a passport, or I-94) showing that they are permanent residents or other eligible noncitizens. OSFA will then initiate a secondary confirmation with the Immigration and Naturalization Service (INS). This confirmation must be received before the student is awarded any aid.

P. If your total gift aid (grants and scholarships) exceeds the total of your tuition, fees, books and supplies, you should consult your federal and state income tax instructions when completing your income tax returns.

Q. OSFA will ask students receiving Veterans Benefits to provide documentation of their VA benefits. These benefits are included in your overall aid package.

R. Your official UGA enrollment status is determined each term at the end of Phase III Registration (Drop/Add). If you enroll full-time and receive aid, and then drop to less than full-time during Phase III Registration, you may be asked to repay aid received.

S. You should use your full legal name when applying for aid. Do not use nicknames,

abbreviations, or middle names as first names. The U.S. Department of Education requires that the name you use when applying for aid matches your name on Social Security Administration records. You will be asked to provide additional information if that is not the case.

T. Students who are studying abroad and regularly enrolled in a degree seeking program are eligible for aid. Students will be asked to provide information on the cost of their study abroad program to determine their aid eligibility.

U. Students should read the "Fees and Financial Aid" section of each semester's *Schedule of Classes* for details on how student financial aid is disbursed.

V. If the semester(s) for which you are requesting aid have ended AND you are no longer enrolled, you will usually not be eligible for aid. If, however, you are involved in verification when the semester(s) end, you MAY be eligible to receive aid when verification is complete. Contact OSFA if you have questions.

W. When completing the FAFSA, **ALL** items must be answered. In particular, failure to indicate housing status (#90), enrollment status (#24-27), and anticipated graduation date (#30) may delay your Award Letter.

TYPES OF AID

Grants, loans, Federal Work-Study, and a limited number of scholarships are available through this office to help defray educational expenses at the University of Georgia. Grants do not have to be repaid. Most loans must be repaid in cash. Federal Work-Study awards are earned during the period of enrollment. You must be enrolled at least half-time to receive a Federal Direct Loan or Federal Direct PLUS Loan. You must be enrolled full-time to receive the Student Incentive Grant and University Academic Scholarships. Federal Pell Grants are available for less than full-time students depending on need. HOPE Scholarships are available for one or more hours of enrollment. All student aid will be awarded based on anticipated full-time enrollment unless otherwise noted on your Award Letter.

A. GRANTS/SCHOLARSHIPS

1. **Federal Pell Grant:** is designated for undergraduate students working toward a first bachelor's degree. The amount of your grant is determined by the Cost of Attendance, the Expected Family Contribution provided by the U.S. Department of Education, and your enrollment status. If you are enrolled full-time (12 or more credit hours) you will receive your full eligibility. If you are enrolled 9 to 11 credit hours, you will receive three-fourths of your eligibility. If you are enrolled 6 to 8 credit hours, you will receive one-half of your eligibility. If you are enrolled less than 6 credit hours, you will receive one-fourth of your eligibility.
2. **Federal Supplemental Educational Opportunity Grant (SEOG):** is designated for undergraduate students working toward a first bachelor's degree. Eligibility is based on Established Financial Need, and funding is limited to students with full Federal Pell Grant eligibility.
3. **Student Incentive Grant (SIG):** is designated for undergraduate Georgia residents working toward a first bachelor's degree and attending full-time. The minimum grant is \$1200 per academic year and awards are made on a renewal basis only. Maximum eligibility is 8 semesters.
4. **Law Enforcement Personnel Dependents Grant (LEPD):** is designated for eligible Georgia residents who are dependent children of Georgia Law enforcement officers, prison guards, or firemen who were permanently disabled or killed in the line of duty. The amount of the grant is \$2000 per academic year. Eligible students should contact OSFA.
5. **Georgia Public Safety Memorial Grant:** is designated for the son or daughter of any Georgia public safety officer who is killed or permanently disabled in the line of duty. This new program, which is funded by the Georgia Lottery for Education, covers

the Cost of Attendance at a Georgia public post-secondary institution, minus other aid received, including the Law Enforcement Personnel Dependents Grant.

6. **HOPE Scholarship (Helping Outstanding Students Educationally):** is funded by Governor Zell Miller's Georgia Lottery for Education and is available to eligible Georgia high school graduates. The HOPE Scholarship will cover tuition, fees, and a \$150 book allowance per semester. Full-time enrollment is not a requirement. Grade point eligibility for entering freshmen is based on a high school GPA of 3.0 or better as determined by the high school and reported to the Georgia Student Finance Commission (GSFC). University of Georgia students receiving HOPE may continue to receive the HOPE Scholarship as a renewal by maintaining a 3.0 overall grade point average on all attempted course work. Transfer students who received HOPE elsewhere will be evaluated on the basis of their GPA on all previous course work. Students who are returning to college or who were not academically eligible for HOPE as freshmen may be eligible after attempting 30 hours. The HOPE Scholarship is reduced by the amount of Federal Pell Grant or other federal grants the student receives. Students receiving a full Federal Pell Grant and Federal SEOG are only eligible for the book allowance. For further details of the HOPE Scholarship Program, contact GSFC at 1-800-546-HOPE.

B. LOAN PROGRAMS

The University of Georgia participates in the Federal Direct Loan Program. The lender for the students' loans and for the parents' loans is the federal government. The U.S. Department of Education's William D. Ford Federal Direct Loan Program is a way to borrow money to pay for school. The federal government will lend you the money while you attend UGA. The U.S. Department of Education's

Direct Loan Repayment Center will handle repayment of your loan(s) and you will be able to choose a repayment plan that fits your needs. If you have previously borrowed, you will now borrow from the federal government and when you leave school, you will be able to consolidate your previous loans directly with the U.S. Department of Education's Direct Loan Repayment Center and make one payment each month. Once you leave school, the point of contact for information about your loan(s) will be 1-800-4-FED-AID.

1. Federal Direct Loan:

- a. The subsidized Federal Direct Loan is need-based and the government pays the interest on this loan while the student is in school and during the six-month grace period. An unsubsidized Federal Direct Loan is non need-based and was created for borrowers who do not qualify for federal interest subsidies and thus the student either pays the interest while in school and during the six-month grace period or it is added to the balance of the loan. These are low-interest loans made to you by the University of Georgia as your lender.
- b. Having your eligibility for a Federal Direct Loan determined does not commit you to accepting a loan.
- c. Annual interest rates are variable for new borrowers. Contact your lender for specific details.
- d. Loan eligibility is based on Established Financial Need (subsidized) or replaces Expected Family Contribution (unsubsidized), and state/lender restrictions. Federal Direct Loan maximums are \$2625 per year in the freshman year, \$3500 per year in the sophomore year, \$5500 per year in the junior and senior years, with a \$23,000 cumulative total of subsidized and unsubsidized loans for all undergraduate study. Graduate students may borrow \$8500 per year. The cumulative total for undergraduate and graduate subsidized and unsubsidized Federal Direct Loans is

\$138,500. The University of Georgia defines "per year" as a twelve month period beginning fall semester and ending summer semester.

- e. The borrower must pay an origination fee equal to four percent of the amount borrowed. This amount is deducted proportionately from each loan disbursement by the lender and is used to help reduce the cost of making these low-interest loans.
 - f. When the loan is approved, checks will be available to students at the beginning of each semester. If your loan is approved for only one semester, you will receive half of your loan at the beginning of the semester and the remainder at the midpoint. If you have subsidized and unsubsidized loans, you will receive a single check for both loans each semester.
 - g. Repayment for most loans begins six months after you leave school. You will sign a promissory note prior to receiving any subsidized and unsubsidized Federal Direct Loan check. This will specify your interest rate and the number of months (grace period) before your repayment begins. The amount of your monthly payment will be determined by the federal government and is based upon your cumulative loan amount and federal regulations.
 - h. First-time borrowers will be contacted by the Student Loans, Grants, and Scholarships Department in Business Services to satisfy entrance interview requirements.
 - i. If you are requesting a Federal Direct Loan (subsidized or unsubsidized), do not complete a loan application. By completing the UGA student financial aid process, you will provide enough information to generate a preprinted promissory note.
- 2. Regents' Scholarship:** Designated for Georgia residents who are enrolled full-time and ranked academically in the upper 25% of their class and who have Established Financial Need. Maximum

amount is \$750 per academic year. Repayment may be satisfied by working full-time in the State of Georgia one year for each \$1,000 received, or by making cash repayment with three percent interest per annum.

3. **Service Cancellable Loans:** Service-Cancellable Stafford Loans are made by the Georgia Student Finance Authority to Georgia residents who are preparing for professions in which there is a critical shortage in Georgia. You may cancel principal and interest payments by practicing in an approved Georgia location twelve months for each academic year of assistance. The approved critical fields at the University of Georgia are: Pharmacy, Veterinary Medicine, Gerontology, and Dietetics.

4. **Federal Direct PLUS Loan:**

- a. These are educational loans for parents of dependent students. There is no income restriction.
- b. The interest rate is variable.
- c. Loan eligibility is based on the Cost of Attendance and other aid you may receive. Each year parents may borrow up to the Cost of Attendance minus any other aid received.
- d. PLUS repayment begins sixty days after the funds are disbursed. Under specific circumstances, a parent borrower may defer interest and/or principal payments of the loan while the student is attending school.
- e. Checks are made payable to the borrower unless the borrower authorizes disbursement to the student, and then the check will be made payable to the student. The Student Loans, Grants, and Scholarships Department in Business Services verifies the student's enrollment, endorses the check, and mails it to the borrower.

C. FEDERAL WORK-STUDY

1. **Federal Work-Study (FWS):** Eligibility for Federal Work-Study is based on Established Financial Need. Amounts range from \$750 to \$1500 per semester. Students are assigned

jobs located on campus and work schedules are made around the student's class schedule.

NOTE: Students who are not Georgia residents are reminded that there is an agency in most states offering grant assistance. If you are interested in applying for state grant assistance but do not know how to contact the agency that serves your home state, you may telephone the Office of Student Financial Aid (706/542-6147) at the University of Georgia.

Satisfactory Academic Progress Policy for Student Financial Aid Recipients

The U.S. Department of Education mandates institutions of higher education to establish minimum standards of satisfactory academic progress for students receiving Federal aid. These same standards are maintained by the University of Georgia for students receiving institutional aid. The policy is included in the Student Financial Aid Application Packet.

Student Information Systems

Student Information Systems provides computer-based information system services to Student Affairs departments. This service involves: maintenance of existing computer-based systems; assisting and/or training user departments in obtaining various ad hoc or short-term reports; development of new "state of the art" user-oriented application systems for both the mainframe computer and various micro-computers; micro-mainframe interface assistance; data base planning, coordination, and consultation. 158 Boyd Graduate Studies Research Center, (706) 542-6135.

Other Student Services and Activities

ART, DRAMA, AND MUSIC ACTIVITIES

Art activities include exhibitions by students and faculty of the School of Art as well as occasional traveling exhibitions,

slide lectures and informal critiques by visiting artists and various student field trips. Spring, summer, and fall sessions in Cortona, Italy are jointly operated by the School of Art and the School of Environmental Design.

All students are eligible to participate in the regular major productions of the University Theatre in the drama department as well as in numerous smaller stage and media activities. Outstanding professional companies also appear on the campus. A summer Studies Abroad Program in Italy and England is available jointly operated by the Department of Drama and the College of Journalism and Mass Communication.

The School of Music presents weekly programs featuring faculty members, guest artists, and students. Other music activities include performances by student choral organizations, band organizations, and the Symphony Orchestra.

CAMPUS TRANSIT SYSTEM

The Campus Transit System, funded by student transportation fees, provides bus service throughout the campus for students and employees. Frequent service connecting academic areas, parking, and residential areas is provided on seven routes Monday through Friday between the hours of 7:00 a.m. and 6:00 p.m. In addition, three routes operate during the evening hours until 12:30 a.m. A Rider's Guide showing the routes, timetables, and bus stops is available on the buses and at many locations throughout campus. Specially equipped vans provide transportation services for mobility-impaired students throughout the service area of the Campus Transit System. Through an agreement with the Athens-Clarke County Government, students with valid UGA ID also have access to the services provided by the Athens Transit System without payment of fares.

FOOD SERVICE

The University operates three food service facilities for general student use: Bolton Hall, Oglethorpe Hall, and Snelling Hall. The dining halls are located at easy-to-reach

locations either by walking or by UGA bus. Two economical meal plans as well as meals on a cash basis are available at these facilities.

The 1997-98 rates for the two meal plan contracts are shown below. Rates for the 1998-99 academic year were not available when this Bulletin was printed. The 1998-99 academic year contract and semester rates may be obtained by calling the Food Services Department, (706) 542-1256.

Academic Year Contract

5 days unlimited meals (Monday-Friday)	\$1,806
7 days unlimited meals (Monday-Sunday lunch)*	\$1,998

*No evening meal on Sunday

The University Food Services Department offers a variety of special events during the academic year, including a Hawaiian Luau, Steak Night, International Celebration, special holiday dinners and ice cream sprees. Meals are served in a pleasant atmosphere and with an unlimited seconds system of service. There are a number of cash basis only outlets located in several of the academic buildings, the main library, the Georgia Museum of Art, the Creamery, and the UGA Golf Course.

LEARNING DISABILITIES CENTER

The University of Georgia Learning Disabilities Center houses three divisions, the Regents' Center for Learning Disorders, the Learning Disabilities Service Division, and the Research and Training Division. The Learning Disabilities Center is nationally recognized for generating research pertaining to adults with learning disabilities, and its assistance program for college students with learning disabilities.

The Learning Disabilities Clinic is funded by the Board of Regents of the University System of Georgia to provide assessment resources to students within the University System with learning problems due to a disability. Comprehensive standardized assessments are available to qualified students

to provide recommendations regarding how to best maximize students' functioning in college and information related to requests for special accommodations and/or modification. There is a fee attached to the diagnostic evaluation.

The Service Program of the Learning Disabilities Center was established to serve both students and faculty by promoting an understanding of learning disabilities, explaining students' needs and helping students arrange classroom modifications that will help them learn to their potential. To be eligible for services, students must be evaluated at the Learning Disorders Center and/or meet criteria established by the Board of Regents. Students should contact the Learning Disabilities Center at (706) 542-4589 for information on procedures necessary for becoming eligible for receiving learning disabilities services at the University of Georgia. Services available include early registration, consultation with faculty, textbooks on tape, note takers, computer lab, learning disabilities support group, and personal and academic counseling. Learning disabilities specialists address individual strengths and weaknesses in special courses and help with learning strategies. There is no cost attached to services.

The Research and Training Division provides state and national technical assistance via interactive TV, satellite teleconferences, e-mail courses, and traditional training formats. The Distance Learning Link (DLL) is housed within this division. The DLL provides satellite teleconferences focusing on topics relevant to the populations with learning disabilities and attention deficit disorders.

PARKING SERVICES DEPARTMENT

All motor vehicles parked on campus between 7:00 a.m. and 5:00 p.m., Monday through Friday are required to be registered with Parking Services and must display a windshield permit authorizing use of specific parking areas. Parking permits for students and employees are issued based on various eligibility requirements and user

options. Parking fees are based on the type of permit issued. For housing students, in addition to the option of surface lot parking a 900-car parking deck located near the high-rise dorm area offers the option of reserved parking.

A parking deck next to the Georgia Center for Continuing Education and pay-by-the-hour lots at the University Bookstore and Tate Student Center provide parking for visitors and University personnel.

Further information concerning parking locations, regulations, and permit types/fees can be obtained by visiting Parking Services or by calling 542-PARK (7275). The Parking Services Building is located in the commuter student parking lot near the Ramsey Student Center on River Road.

PSYCHOLOGY CLINIC

The Psychology Clinic, located in the Psychology Building, offers a wide range of psychological services to students, faculty, staff, and to the general community. These services include assessment of various psychological problems and treatment to alleviate these problems. Problems dealt with include depression, anxiety, intense fears, headaches, hypertension, chronic pain, eating disorders, interpersonal difficulties, marital problems and children's problems, among others. Appointments and/or information are available by calling the Psychology Clinic at 542-1173. Fees for service are made affordable through a sliding fee scale based on income.

TUTORIAL SERVICES

The University Tutorial Service provides one-on-one or small group tutorial assistance to all students free of charge. Trained undergraduate and graduate peer tutors offer assistance in many undergraduate level core courses including mathematics, biology, chemistry, physics, English, Spanish, French, German, and business courses. Students can receive walk-in assistance and/or make appointments. Call 542-7575 for information.

Opportunities and Programs

ACADEMIC COMMON MARKET

The University of Georgia participates in the Academic Common Market, an agreement for sharing specialized academic programs among the participating states of the Southern Regional Education Board (SREB). Participating states are able to make arrangements for their residents who are fully admissible into specific University academic programs to enroll on an in-state tuition basis. Applicants must (1) be accepted for admission into one of the programs listed below, and (2) obtain certification of residency from the Common Market Coordinator in their home state. The following University programs are available to residents of the indicated states:

<i>PROGRAM</i>	<i>AVAILABLE TO RESIDENTS OF:</i>
BBA in Risk Management and Insurance	Maryland
BBA in International Business	Kentucky, Louisiana
BFA in Art/Interior Design	Maryland
BFA in Photographic Design	Kentucky
BFA in Interdisciplinary Studies (Scientific Illustration)	Maryland, South Carolina, Virginia
BLA in Landscape Architecture	Tennessee
BMUS in Music Therapy	Alabama, Kentucky, Maryland, Mississippi, South Carolina, Tennessee
BS in Astronomy and Physics	Kentucky
BS in Genetics	Alabama, Kentucky, Louisiana, Maryland, South Carolina
AB in Japanese Language and Literature	Kentucky
BSA in Environmental Soil Science	Maryland

BSED in Dance Education	Tennessee
BSFCS in Consumer Journalism	South Carolina
BSFCS in Child and Family Development	Maryland
BSEH in Environmental Health	South Carolina

For further information about the Academic Common Market, contact the Registrar's Office or the Southern Regional Education Board, 592 Tenth Street, N.W., Atlanta, GA 30318-5790.

ADVANCED PLACEMENT PROGRAM

The purpose of the Advanced Placement Program staff is to coordinate and supervise advanced placement activities instituted by the University of Georgia and to provide liaison among University units in matters concerning both advanced placement and credit by exemption in basic courses.

Generally, advanced placement tests are given to new students during summer orientation sessions prior to fall enrollment. A special session is planned for students admitted to the Honors Program. It provides coordinated placement testing and academic counseling, followed by early class registration for fall semester. Students invited to these sessions are urged to attend, as limited time during fall registration does not permit the same intensive testing and counseling procedure.

In addition to its own Advanced Placement Program, the University also participates in the Advanced Placement Program of the College Board. Students making an acceptable score on the College Board program are given, on the recommendation of the respective department, advanced placement and credit in all fields.

The University also grants exemption and credit on the basis of the College Board Achievement or Advanced Placement Test scores in foreign languages, mathematics, biology, physics, chemistry, economics, English, American history, European history, art, music, political science, and computer science.

Students planning to enroll at the University of Georgia who took the College Board Achievement Tests and/or participated in the special Advanced Placement Program of the College Board should request that the College Board testing center submit their scores to the Honors Program, University of Georgia, Athens, Georgia 30602-6116. Inquiries concerning the Advanced Placement Program should be directed to the Honors Program, University of Georgia, Athens, GA 30602-6116, (706) 542-3240.

ADVANCED PLACEMENT PROGRAM FOR AP TEACHERS

This program is for high school teachers who are teaching or are planning to teach high school Advanced Placement (AP) courses. Three hours of graduate or undergraduate credit in the specific subject area will be offered for each course. All of

the AP courses will be offered as part of an annual two-week summer AP institute, held approximately four weeks after the spring term for the public schools is over.

Faculty members for AP institutes are selected from members of UGA's faculty who are nationally recognized scholars in their field and supplemented by high school teachers who are thoroughly familiar with the College Board's Advanced Placement Program.

Students must register for AP courses through the Special Academic Programs Office. For more information, contact: Ms. Mary Lue Walser, Program Coordinator, or Dr. Gene Michaels, Director Special Academic Programs, Room 209, Biological Sciences Bldg., (706) 542-7623.

AMERICAN LANGUAGE PROGRAM

The University of Georgia's American Language Program teaches English as a second language to speakers of other languages seeking to improve their communicative skills. In courses offered by the American Language Program, students study English for preparation for enrollment in universities or colleges whose primary language of instruction is English; for



cultural adaptation; or for pronunciation, fluency, and accent reduction. Courses are designed on an intensive schedule to help students learn English in the shortest possible time. Admission to the American Language Program is reserved for students who have completed secondary school studies and who can devote a majority of their time to learning English.

American Language Program faculty also teach two graduate academic credit courses specifically designed to prepare international graduate students to become University graduate teaching or laboratory assistants.

Information regarding the American Language Program may be obtained on the department's World Wide Web page, <http://www.gactr.uga.edu/ALP/alp.html>, by calling (706) 542-4095, or by visiting the offices at 192 Georgia Center.

GOVERNOR'S INTERN PROGRAM

The Governor's Intern Program provides a unique academic experience while giving students a practical, firsthand look at agencies in state and local governments or non-profit organizations throughout Georgia. Internships may be full or part-time and are available for each academic term. Interns must be currently enrolled junior, senior, graduate, or law students with a 2.5 or higher GPA. Interns receive a stipend, and internships may be done for academic credit at the discretion of the student's major department. A report is submitted by each intern to the Governor's Intern Program after each project's completion. Upon approval by the staff, the report is filed in the Georgia State Archives for future reference. Application deadlines are generally as follows: July 15 for fall semester, October 15 for spring semester, and April 15 for summer semester. Applications and specific deadlines may be obtained from: Career Planning and Placement Center, Clark Howell Hall, or through Governor's Intern Program, 115 State Capitol, Atlanta, GA 30334.

HONORS PROGRAM

The Honors Program provides participants with special Honors classes in the

freshmen/sophomore core curriculum, Honors courses in a variety of majors, the opportunity to design and pursue independent interdisciplinary majors, more intensive versions of courses required for departmental majors, and independent study under faculty supervision culminating in an Honors thesis or project. In addition to individualized advising throughout their education, the program provides students with special support for graduate and professional school application, as well as national fellowship and scholarship competitions. The Honors Program is open to qualified undergraduates in all the schools and colleges of the University.

Most Honors classes and seminars have enrollments of 20 students or less and are taught by specially selected faculty. Unlike high school Honors or advanced placement classes, the University's Honors courses do not carry more credit, offer higher grade points, or require substantial additional work beyond regular classes. Rather, they are smaller, enriched in content, and sometimes more specialized. Honors classes provide faculty with opportunities to introduce their disciplines more deeply, employing innovative and more individualized approaches. Students in the program choose from approximately 180 Honors classes offered annually. These classes usually fulfill core curriculum requirements. This bulletin lists Honors classes under the departments in which they are offered. Honors course numbers are followed by an "H."

Honors students may enroll in Upper division classes in the major with Honors Option to pursue a subject more deeply within the setting of a regular course. Students arrange additional readings and other assignments with the class instructor and secure Honors credit for these classes by filing a form with the Honors Program. Honors students may also enroll in directed study classes which enable them to work independently on a sustained research project under the guidance of a faculty member, usually leading to an Honors thesis, often comparable to a Master's thesis. But the outcome may take a different

form--a recital, exhibition or performance. Honors directed reading classes (4960H-4980H) and Honors theses classes (4990H) are available in most departments. Additionally, Honors students with sufficient background are encouraged to participate in graduate courses, with the approval of the department, Honors Office, and in cases of 8000 (Ph.D.) level courses, the Dean of the Graduate School.

Students may enter the Honors Program as freshmen, or by collegiate entry after at least one semester's enrollment. The Honors Program accepts transfer students as well.

For further information about the Honors Program consult the Honors Program Student handbook, available from the Honors Program office, or at <<http://www.uga.edu/~honors/>>. Direct inquiries to The Honors Program, (706) 542-3240.

MEDICAL COLLEGE OF GEORGIA SCHOOL OF NURSING AT ATHENS (SONAT)

In 1974 a program leading to a baccalaureate degree in nursing was established in Athens; this is a satellite to the regular program of the Medical College of Georgia School of Nursing in Augusta. In order to qualify, students must take 60 semester hours of pre-nursing core curriculum. This may be completed as a student at the University of Georgia enrolled in Arts and Sciences, Pre-Nursing.

The student applies to the Medical College of Georgia to take upper division courses in nursing. These classes are limited to nursing students and are taught by the faculty at the Medical College of Georgia School of Nursing in Athens (SONAT).

SONAT faculty supervise clinical experiences at a variety of health care agencies in the Athens and surrounding areas (may include Atlanta and Augusta).

Students enrolled in the SONAT program have all the rights and privileges of University students and also those of the Medical College of Georgia. Upon graduation from the Medical College of Georgia, students are eligible to take the National Council Licensing Examination.

SONAT offices are located in Athens.

NATIONAL STUDENT EXCHANGE

See page 110 under Office of the Vice President for Student Affairs.

OAK RIDGE ASSOCIATED UNIVERSITIES

Since 1948, students and faculty of the University of Georgia have benefitted from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Sciences and Education, the DOE facility that ORAU manages, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of under represented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the *Resource Guide*, available on the World Wide Web at <http://www.oraugov/orise/resgd/htm>, or by calling either of the contacts below.

ORAU's Office of Higher Education Initiatives seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Junior Faculty

Enhancement Awards and the Visiting Industrial Scientist Program, and various services to chief research officers.

For more information about ORAU and its programs, contact Mr. Kirk D. Bertram, ORAU Council member, at 706-542-3184; contact Monnie E. Champion, ORAU Corporate Secretary, at 423-576-3306; or the ORAU home page at <http://www.oraugov.org>.

STUDY ABROAD PROGRAMS

The University of Georgia sponsors a variety of study abroad programs. The Office of International Education (OIE) offers advisory services and provides information on study abroad programs for summer, quarter, semester, or academic year periods. The OIE maintains an extensive library for those seeking study, work, and travel abroad opportunities.

Among the University of Georgia's interdisciplinary study abroad programs, the School of Art offers a program in Cortona (Tuscany), Italy, during spring and summer semesters. Established in 1970, each program consists of a travel period (Rome, Pompeii, Venice, etc.) and residential studio and class work. Graduate and undergraduate credit courses are available in art history, studio art (ceramics, book arts and papermaking, drawing, interior design, jewelry and metalwork, painting, printmaking, photography, sculpture, and watercolor), landscape architecture, and Italian. Stipends are competitively available. Applications are due approximately fifteen weeks before the beginning of each term. For more information, contact Studies Abroad-Cortona, School of Art, (706) 542-7011.

Graphic design students may participate in an exchange program with the prestigious Fachhochschule Fur Gestaltung Pforzheim, located near Heidelberg, Germany. Classes begin in September and end in February, with organized field trips throughout Europe. For information, contact Ken Williams, School of Art, (706) 542-1567.

The UGA Study Abroad Program in Verona, Italy is a summer program which features a wide variety of courses for students in the social sciences. Under-

graduate as well as graduate students may take classes in fields such as political science, anthropology, sociology, history, geography, and law. The courses emphasize global, environmental, social, cultural, political, and economic issues. The classes are taught in English by UGA faculty in a congenial environment featuring close student-faculty interaction. Two week-long excursions are included in the program. One is a cultural tour of southern Italy which takes place prior to the beginning of classes. The second tour concludes the program with visits to Salzburg, Innsbruck, Munich, Prague, and cities in northern Italy. Verona is ideally located for weekend travel throughout Europe. For further information, please contact Dr. Markus M. L. Crepaz, Director of the Verona Program, at 542-2947 or on e-mail: mcrepaz@uga.cc.uga.edu.

Each summer the University of Georgia departments of English, History, and Political Science offer a program at Oxford University. The participants live at historic Jesus College. Students may earn credit in core courses and courses related to their academic major. The faculty consists of American and British scholars who teach small tutorials. For information, contact Judith Shaw at 342 Park Hall, (706) 542-1261.

The Classics Study Abroad Program in Rome, Italy is operated each summer. The program is designed especially for students who have not previously studied classical civilization. Credit hours can be earned and used to fulfill the literature/humanities and fine arts requirements of many schools. Instruction includes both regular classes and numerous field trips. Knowledge of a foreign language is not required. For further information, call (706) 542-2179 in Park Hall.

Another summer program, sponsored by the Department of Drama and the College of Journalism and Mass Communication, takes place in two countries, Italy and England. Students may take courses in drama or journalism. For further information, call John English, College of Journalism and Mass Communication, (706) 542-5028, or Stanley Longman, Department of Drama, (706) 542-2091.

At undergraduate, graduate, and faculty levels, the Terry College of Business has exchange programs throughout the world with such countries as France, Holland, Germany, Chile, and Greece. For information, contact the Terry College of Business, (706) 542-3468, in Brooks Hall.

The College of Family and Consumer Sciences in partnership with the American Institute for Foreign Study offers a 6-week study abroad program in London during summer. Students can earn between 3 and 15 credits in major courses. Instruction includes both regular classes and numerous field trips. Areas of study vary, but students from any major in the College may participate. A 6-week part-time internship gaining experience with a British business or organization is also available. For further information, contact Dr. Jan Hathcote at 224 Dawson Hall, (706) 542-4907.

The University of Georgia also participates in several other reciprocal exchange programs which allow students to pay UGA tuition and fees while attending academic institutions overseas. These exchanges take place in several countries. Some exchanges are coordinated by academic departments and others are coordinated by the OIE. See your department head or a study abroad advisor in the OIE for more information. Student Financial Aid, including the HOPE Scholarship, may be applied to UGA-sponsored study abroad and exchange programs. For initial information about UGA requirements for using financial aid for study abroad, contact the OIE.

In addition to UGA-sponsored study abroad and exchange programs, many other colleges and university, language institutes, and international organizations offer opportunities for overseas study, travel, work, teaching, and volunteer experiences. Students may obtain information about these options through the OIE.

Some programs sponsored by the University of Georgia offer resident credit (otherwise, transfer credit is awarded); students should check with the individual program. Credit earned in programs sponsored by other institutions or organizations will be recorded as transfer

credit if accepted by the University of Georgia. To obtain credit for these programs, students must complete the *UGA Study Abroad Credit Approval Form* before departing. Obtain the form and additional information from the OIE, 200 Barrow Hall, (706) 542-0010. Final determination of the transfer of credit will be made by the admissions office and/or the academic departments upon completion of the program and receipt of the final transcript. Student Financial Aid, including the HOPE Scholarship, may be applied to programs sponsored by other institutions, provided the student completes the UGA Study Abroad Credit Approval Form and meets all other UGA requirements for study abroad and financial aid.

UNIVERSITY CENTER IN GEORGIA CROSS REGISTRATION PROGRAM

The University Center in Georgia is a consortium of nineteen public and private institutions of higher learning in the Atlanta/Athens area, including the University of Georgia. Founded in 1938, the consortium provides a structure to enhance educational opportunities through academic cooperation among the member institutions and their communities.

The purpose of cross registration is to provide opportunities for enriched educational programs by permitting students at any University Center institution to take courses at any member institution. To participate, cross registration students must enroll in at least one course at their home institution. Application forms and guidelines for cross registration may be obtained by contacting the University of Georgia cross registration coordinator at (706) 542-7715.

UNIVERSITY STUDIES

University Studies serves traditional and nontraditional students who reside in Athens-Clarke County and surrounding counties which do not include another University System of Georgia college or university. University Studies may also serve students who are enrolled because of special circumstances identified through

reviews including those conducted by the Faculty Admissions Committee. In serving students who are seeking to earn degrees and who are in their first and second year of study, University Studies provides academic advising, academic support programs, and student services to enhance students' academic success.

University Studies also establishes and maintains effective partnerships with Athens area institutions, organizations, businesses, and governmental agencies for the purpose of furthering students' educational opportunities and attainments.

Admission

Students must apply for regular undergraduate admission to the University of Georgia. Upon admission they are classified as Arts and Sciences—University Studies and may enroll in any regular academic offering which is consistent with their academic program.

Program Requirements

Students admitted as **freshmen** must complete 30 cumulative UGA semester hours (45 quarter hours) in University Studies and earn a 2.0 cumulative GPA prior to transferring to another academic department (some academic departments have a higher GPA requirement). Freshmen must earn a minimum 2.0 cumulative GPA upon completion of a maximum of 40 semester hours (60 quarter hours) in University Studies to be allowed to continue at the University of Georgia.

Students admitted as **transfer** students with **less than 30 semester hours** (45 quarter hours) of transfer work must complete a minimum of 30 cumulative UGA semester hours (45 quarter hours) in University Studies and must earn a minimum cumulative GPA of 2.0 in order to transfer to an academic major (some academic departments have a higher GPA requirement). Transfer students admitted with less than 30 semester hours (45 quarter hours) of transfer work must earn a minimum cumulative GPA of 2.0 upon completion of 30 cumulative UGA semester hours (45 quarter hours) or completion of 60 overall semester hours (90 quarter hours) to

continue their studies at the University of Georgia.

Students admitted as **transfer** students with **more than 30 semester hours (45 quarter hours)** of transfer work must earn a cumulative GPA of 2.0 upon completion of a maximum of 60 overall semester hours (90 quarter hours) to be allowed to transfer into a major (some academic departments have a higher GPA requirement) and to be allowed to continue their studies at the University of Georgia.

Academic Advising

University Studies requires academic advising for every student prior to registration. University Studies academic advisors assist students in planning their programs of study and in developing meaningful educational plans that are compatible with students' goals. Academic advisors interact individually with the students and monitor their academic progress. Advisors are available by appointment throughout the term to ensure that students' academic needs are met.

Academic Support Programs

Recognizing the significance of the first two years as a foundation for academic success, University Studies offers academic support programs to assist students as they pursue their educational goals, adjust to the collegiate environment, and engage positively in their academic pursuit throughout the freshman and sophomore years. A keystone in the department's academic support program is the course UNIV 1103: Strategies for Academic Success—University Studies, in which all beginning University Studies students are expected to enroll during their first semester in residence.

Student Services

Basic to the University Studies student services program is the goal of fully integrating students into the dynamic social, cultural, and intellectual life of the University, while providing specialized services and activities which offer opportunities for involvement in activities related to their overall success at the University. University Studies provides linkages with

and access to the numerous and varied educational, social, cultural, and recreational resources of the University of Georgia. University Studies sponsors socials and an annual honors reception for students who have been named to the University's Dean's List or as Presidential Scholars.

To encourage interaction among students and to provide leadership opportunities, University Studies sponsors student groups and committees. The University Studies Student Activities Committee brings the student perspective to relevant issues and helps to plan various student activities. The Freshman Advisory Group gives students an opportunity to share ideas and issues related to the first-year transition into the University. The Adult/Returning Student Advisory Group brings together students returning to school while balancing work and families with their academic programs.

Community Service and Outreach

University Studies establishes networks and advisory committees, comprising community and business leaders who serve as vital partners for the advancement of educational access and academic excellence for area residents. Pre-enrollment advisement is provided to prospective students who have questions about returning to the classroom. The advisor discusses the decision to return to school, taking into consideration students' academic backgrounds and preparedness as well as their educational goals. The advisor discusses educational opportunities available to area residents. Back-to-School workshops and seminars are conducted in the community, on campus, and on site at businesses and industries. Community and Adult Reentry Education (CARE) is a University Studies program which provides information, access, and academic support for new and returning students in the community and for University of Georgia employees.

UNIVERSITY SYSTEM OF GEORGIA INDEPENDENT STUDY

The mission of University System of Georgia Independent Study is to offer

University System academic credit courses to University System students and individuals who are interested in earning academic credit through self-paced guided study.

Independent Study is a University System of Georgia academic program that provides freedom from the classroom structure. Independent Study provides flexibility of registration, permitting students to register at any time and take several courses simultaneously with up to a year to complete each course. Independent Study is ideally suited for the student who is purposeful, self-directed, and able to exercise self-discipline in completing requirements of a course. Independent Study courses are offered by academic departments located at universities in the University System of Georgia. Faculty of the academic department prepare the courses offered and grade the lessons submitted by students to satisfy requirements of the courses. Academic credits earned through Independent Study are recorded on the student's permanent record in the University of Georgia Registrar's Office and may be used to satisfy degree requirements according to the regulations of the college or university from which the student plans to graduate.

Academic Policies

University of Georgia students who take Independent Study courses taught by UGA faculty have the option of registering for resident credit. The decision to grant resident credit is made at the time of Independent Study course registration and remains in effect until the course is completed. Students must request resident credit on their registration form, and eligibility for resident credit will be verified by Independent Study prior to registration. Resident credit earned through Independent Study may be used to satisfy the resident hours required by the University of Georgia for a baccalaureate degree. Resident credit will be included in both cumulative and overall grade point averages.

Independent Study courses offered by other University System universities must be taken for nonresident credit. Nonresident credit is considered transfer credit by the University of Georgia. Nonresident credit

will be counted in a student's overall grade point average and recorded in a student's official record as transfer credit.

A student on academic or disciplinary dismissal may register for an Independent Study course with written permission from the student's academic dean. The written permission must specify the number of hours the student may earn while on academic or disciplinary dismissal. Students on academic or disciplinary dismissal may not earn resident credit for Independent Study courses.

University System of Georgia Independent Study students are responsible for knowing and abiding by Independent Study policies, are responsible for seeking academic advisement prior to registration, and are subject to the academic policies of their institutions.

Registration and Information

Advisement should be sought through the appropriate advisor in a student's degree program prior to registering for Independent Study courses. To register for Independent Study, students should complete a registration form (available from the Independent Study office, websites, or from an Independent Study catalog). Tuition fees must be paid in full at the time of registration. Fees are based on a per-credit-hour rate regardless of credit hours taken or matriculation fees assessed by the University of Georgia. Independent Study will accept an invoice, or authorization to bill, from an outside agency as long as such authorized invoices do not contain conditions to be met before payment is made (e.g., payment may not be based on successful completion of a course). University of Georgia students receiving financial aid through the University may be eligible to apply financial aid awards toward Independent Study matriculation fees (for both resident and nonresident credit).

Independent Study offers several on-line courses on the World Wide Web which may include bulletin boards, chat rooms, links to related sites, and other resources. Students have the option to submit lessons by fax or e-mail for select courses.

Registration forms with appropriate fees should be sent to University System of Georgia Independent Study, Georgia Center for Continuing Education, University of Georgia, Athens, GA 30602-3603, or brought to Independent Study in Suite 193 of the Georgia Center. Independent Study registration is continuous Monday through Friday, from 8:00 a.m. to 4:30 p.m. Registration procedures usually take approximately 30 minutes and students should plan their schedules accordingly. Office hours are from 8:00 a.m. to 5:00 p.m. Monday through Friday. The office is closed during University of Georgia holidays. For further information, contact the Independent Study office at (706) 542-3243 or 1-800-877-3243 or e-mail usgis@arches.uga.edu. The Independent Study catalog is available on the World Wide Web at <http://www.gactr.uga.edu/usgis/toc.html>.

UNIVERSITY SYSTEM CENTER—GWINNETT

The Board of Regents of the University System of Georgia established the University System Center—Gwinnett to provide higher education in Gwinnett County. The University of Georgia, Georgia State University, and DeKalb College participate in a consortium to provide academic courses at the undergraduate and graduate levels.

The University of Georgia offers resident credit courses at the University System Center—Gwinnett that may be used as part of an approved degree program. Classes are taught by faculty approved by academic departments of the schools and colleges of the University.

Continuing education programs in a variety of academic and occupational disciplines are scheduled at the University System Center—Gwinnett. Instruction is delivered in traditional workshop format, via distance learning, or at other locations in the area.

Additional information concerning programs of study offered at the University System Center—Gwinnett is available by contacting the University of Georgia Gwinnett Office (770) 995-6885.

Campus and Community Resources

CLASSIC CENTER

A community civic and convention center complex, the Classic Center on the east end of downtown Athens features a historic fire hall as its architectural centerpiece. The facility includes a banquet/meeting hall, exhibit hall, plazas, and a performing arts theater.

CLASSROOM AND LABORATORY FACILITIES

Almost 720 rooms support the classroom and laboratory instruction at the University of Georgia. A small number of large lecture halls combine with general classrooms, specialized classrooms, class laboratories, and a few assembly halls to provide a vast array of instructional support facilities. Another 1400 rooms house non-instructional laboratory activities.

The traditional science laboratories are located primarily on south campus in buildings known as the Science Center Complex—six buildings that house the biological sciences, chemistry, physics, geology, geography, food science, and animal sciences. All of the buildings have well-equipped laboratories for instruction and research programs. In addition, a new Life Sciences building houses research and instructional space for the biochemistry and genetics departments.

In addition to the Science Center and the Life Sciences Building, well-equipped laboratories are available throughout the campus for departmental instruction and research programs including those in the College of Agricultural and Environmental Sciences in Conner Hall, The College of Family and Consumer Sciences in Dawson

Hall and Spiers Hall, and the Robert C. Wilson School of Pharmacy, the D.B. Warnell School of Forest Resources, and the College of Veterinary Medicine, each in its own building.

Modern instructional techniques require modern equipment. In many classrooms, state-of-the-art technology is used to illustrate and demonstrate instructional concepts. In most buildings, computer laboratories are available to students either in an open access environment or in support of specific courses. In some buildings, both types of computer laboratories are available to the student. The Terry College of Business and other disciplines which utilize the case-style method of teaching generally utilize case-style classrooms. The Henry W. Grady College of Journalism and Mass Communication maintains radio and television studios in addition to other modern electronic communications laboratories.

GEORGIA MUSEUM OF ART

The Georgia Museum of Art was established in 1945 when Alfred H. Holbrook donated his collection of 100 American paintings to the University of Georgia. The museum opened in the basement of the university library in 1948 on north campus, and took over the entire building in the early 1950s when a new library was constructed. A new museum building, at 90 Carlton Street in the Performing and Visual Arts Complex on East Campus, opened in April 1996.

In the years since Holbrook's original gift, the permanent collection has grown by gift and acquisition to more than 7,000 works of art. These works include 19th- and 20th-century American paintings, a Kress Study Collection of Italian Renaissance paintings,

and an extensive collection of prints and drawings by American, European, and Oriental masters.

The museum presents a schedule of changing exhibitions organized by the staff from the permanent collection and private and public collections as well as special traveling exhibitions from throughout the United States. Lectures, gallery talks, film series, family days, and other events are scheduled to complement these exhibitions. Museum tours and special viewing of works in the permanent collection are available for university classes by request.

The Georgia Museum of Art was designated the State's Official Art Museum by the 1982 Session of the Georgia General Assembly. Partial support for the exhibitions and programs at the Georgia Museum of Art is provided by the Georgia Council for the Arts through the appropriations of the Georgia General Assembly and the National Endowment for the Arts. Hours are: Closed Mondays; Tuesday, Thursday, Saturday, 10 a.m.-5 p.m.; Friday, 10 a.m.-9 p.m.; Sunday, 1 p.m.-5 p.m. Admission is free.

The Museum Shop, which offers an array of art-related gift items, cards, posters, and books is open Monday through Saturday, 11 a.m.-4 p.m. and Sunday, 1-4 p.m.

GEORGIA REPERTORY THEATRE

The Georgia Repertory Theatre is a fully professional repertory theatre company established as a resident theatre which presents a spring season in Athens. Presented in cooperation with Actors Equity Association, the professional actors organization, the Georgia Repertory Theatre presents new plays by established American playwrights.

The Georgia Repertory Theatre provides students and the University community and visitors with the opportunity to see the highest level professional theatre.

LIBRARIES

The University of Georgia Libraries are composed of three major on-campus libraries: the Main Library, the Science Library and the Law Library, which is

administered by the School of Law. There also are several small collections such as the Curriculum Materials Center (Education), the Georgia Center for Continuing Education Library, the Veterinary Medicine reading room, and various lab collections. The UGA Libraries' system also includes libraries at the experiment stations in Griffin and Tifton, and the marine stations at Sapelo and Skidaway.

The UGA Library is the largest university library in the State of Georgia. It is a member of the prestigious Association of Research Libraries consisting of the largest research libraries in North America and ranks in the top thirty of these libraries.

The Libraries contain more than 3.3 million books, serials and documents, and many other items, including manuscripts, photographs, drawings and newspapers. The map collection incorporates over 590,000 items and the microform collection numbers more than 5.5 million. These collections support the curricular and research needs of the campus and are available to library users both on the campus and across the state.

An outstanding feature of the Main Library is the Hargrett Rare Book and Manuscript Library, a repository of rare and priceless relics. Among the collections are the works and memorabilia of Erskine Caldwell and Margaret Mitchell, the original Confederate Constitution, Confederate imprints, a notable Georgiana collection, many Southern historical manuscripts and the sheet music of many well-known musicians.

The Richard B. Russell Library for Political Research and Studies is located on the west side of the Main Library. Comparable in scope to a presidential library, it houses the papers and memorabilia of the late Sen. Russell, as well as the papers of former Secretary of State Dean Rusk, Sen. Herman E. Talmadge and many other elected officials, government appointees and civic leaders.

The Peabody Award Archive is housed in the Media Department of the Main Library. It contains most entries to the Peabody Award, which was founded in 1940



and honors excellence in broadcasting. The archive holds over 40,000 titles, with radio programs dating from 1940 and television from 1948.

Special services for students include orientation to and tours of the libraries services and collections; individual reference conferences for person undertaking major research papers; individual stations for audio and video materials, photocopy machines, and access to information in over 130 networked databases. In addition to access through workstations within the Libraries, most of the databases are available on the Internet at the GALILEO homepage (<http://www.galileo.peachnet.edu>). The Libraries' catalog and selected other electronic resources are available through the UCNS central IBM system menu. In addition, specialized electronic resources are available in the Libraries on dedicated workstations. The Main Library also houses a computer lab operated by UCNS.

For additional information on Libraries collections and services, contact the Office of the University Librarian, University of Georgia, Athens, GA 30602. (706) 542-0621. (<http://www.libs.uga.edu>)

OFFICE OF INSTRUCTIONAL SUPPORT AND DEVELOPMENT

Director: Dr. William K. Jackson, 542-1355

Associate Director: Dr. Jay Harriman, 542-1582

OISD is a unit within Academic Affairs devoted to the advancement of instruction at the University. OISD is advised by a faculty committee and reports directly to the Vice President for Academic Affairs. The central mission of OISD is to provide campus-wide leadership on matters relating to instruction. OISD coordinates over 30 programs for faculty, administrators, and graduate teaching assistants, including **instructional development and instructional technology programs** (the Instructional Improvement Grants Program, Instructional Technology Grants Program, Instructional Development Lab, ILSOC, Large Class Interest Group, and instructional consultation for faculty); **faculty development programs** (Lilly Teaching Fellows Program, Senior Teaching Fellows Program, Teaching Improvement Process, Teaching and Learning Group, Colloquium for New Faculty, and noon seminars); **Graduate Teaching and Lab Assistant**

support services (GSC777-level III, GTA Mentoring Program, Workshop for GTAs, GTA Teaching Awards, and TA Advisory Committee); and, **publications** (*Keys to Professional and Personal Development for Faculty, Teaching at UGA, GTA Newsletter, GTA Handbook, IIG & ITG Summaries*).

OISD's Instructional Resources Center offers facilities design for media technology; training and support for technology-enhanced classrooms; the University Cablevision system; media collections including the WSB TV newsfilm archives, and educational films and videos; creative production services in multimedia, video, audio, graphics, and photography; AV equipment checkout and delivery; and a variety of other media services.

OFFICE OF INTERNATIONAL DEVELOPMENT

The Office of International Development encourages a broader vision and understanding of the increasingly interdependent world and global economy. The Office compiles and maintains information on all faculty and staff with international experience. In addition, International Development systematically identifies opportunities with governments, development banks, and foundations to facilitate faculty involvement in international collaborative research, technology transfer, and exchange relationships with colleagues abroad, particularly in the developing nations. When faculty participate in these opportunities, the office provides assistance in proposal writing and packaging to foster these activities of mutual benefit to UGA and its international partners.

The Office of International Development serves as a clearinghouse for all international activities planned or underway at the University. The office has spearheaded UGA involvement in successful projects in Burkina Faso, Brazil, and Mexico, among many others. International Development facilitates advanced long-term training for scores of foreign students and organizes development programs for faculty and staff at UGA. The Office of International Development's community outreach takes

the form of educational programs such as presentations, lectures, and co-sponsorship of international conferences.

The Office of International Development offers several services to the University community:

- Identifies and publicizes international development projects
- Links faculty with requests for technical assistance from donor organizations
- Assists in preparing proposals to international donor organizations
- Serves as liaison with international sponsoring agencies and foundations
- Organizes training programs for international students
- Assists students sponsored by federal and international agencies
- Administers language courses for faculty and staff
- Provides administrative support for Area Studies Centers
- Coordinates and monitors UGA international agreements

PERFORMING ARTS CENTER

The Performing Arts Center, a magnificent facility located within the University's newly constructed Performing and Visual Arts Complex on East Campus, houses two music recital halls: Hugh Hodgson Concert Hall is named for the founder of the UGA School of Music and seats 1,100 in a festival-style setting where seats surround the stage; Ramsey Concert Hall is the smaller venue seating 360 and is named in honor of the late Bernard Ramsey, a major benefactor of the University. Both halls boast superb acoustics and state-of-the-art recording systems.

The Performing Arts Center serves as a showcase for world-class performers and ensembles such as pianist Andre Watts, violinist Midori, the Vienna Choir Boys, and the Atlanta Symphony Orchestra. It also provides a home for UGA's faculty and student performers.

RAMSEY STUDENT CENTER FOR PHYSICAL ACTIVITIES

The Ramsey Student Center for Physical

Activities encompasses 425,000 square feet and includes five gymnasiums, three swimming pools, three multi-purpose rooms, a climbing wall, ten racquetball courts, two international squash courts, a strength and conditioning room, an 1/8-mile track, an outdoor equipment rental room, and an outdoor resource center. Facilities at the Ramsey Center are available to University of Georgia students, staff, faculty, and their dependents for the appropriately assessed fee. The Ramsey Student Center is open Monday through Friday from 6 a.m. to 11 p.m., Saturdays 9 a.m. to 6 p.m., and Sundays 1 p.m. to 11 p.m.

STATE BOTANICAL GARDEN OF GEORGIA

The State Botanical Garden of Georgia is a public, non-profit, educational facility under the auspices of the University of Georgia. The mission is to foster appreciation, understanding, and stewardship of plants and nature through research, collections and displays, horticultural gardens, and educational programs.

The garden is located at 2450 South Milledge Avenue, one mile south of the Athens South Bypass (U.S. 129/441). Founded in 1968, the garden now encompasses over 300 acres, much of which borders the Middle Oconee River. The garden features a number of specialty gardens and collections plus five miles of

nature trails. The Day Chapel is available for weddings and other special events. The Visitor Center/Conservatory features a permanent display of tropical and semitropical plants along with classrooms, offices, a gift shop, and a cafe which serves lunch daily. The garden is open daily from 8 a.m. to dusk. The Visitor Center/Conservatory is open Monday through Saturday from 9 a.m. to 4:30 p.m. and on Sundays from 11:30 a.m. to 4:30 p.m., excepting certain holidays. For more information, call (706) 542-1244.

UNIVERSITY BOOKSTORE

The University Bookstore offers a bright, contemporary atmosphere featuring spacious aisles, uncrowded shelves and expedient check-out lanes. Designed to serve the students, faculty and staff of the University, the store maintains a complete stock of all course-related supplies and textbooks, new and used, as well as a large inventory of general reading books. Microcomputers from several prominent manufacturers are available to qualified buyers at special educational prices. Visitors to the store will also find a wide selection of University of Georgia fashion apparel and gift items, snacks, sundries and campus life accessories. Located next to the Tate Student Center and across from Sanford Stadium, the Bookstore is open from 8:00 a.m. until 5:00 p.m., Monday through Friday with extended hours for special occasions.



Special Services and Facilities

Special services and facilities of the University of Georgia include community education services, various institutes, the Georgia Center for Continuing Education, the University Press, Athletic Association, and Alumni Association. Some of these are described below.

The Georgia Center for Continuing Education

Associate Vice President for Public Service and Outreach and Director:
Edward G. Simpson, Jr., (706) 542-3451

The Georgia Center for Continuing Education seeks to serve the learning needs of adults and organizations and to provide leadership in developing the theory and practice of continuing education. One of the major functions of the University is to offer credit and non-credit continuing education programs on campus and throughout the state. The Center draws on the full resources of the University, working closely with the faculty and participating groups to evaluate its various programs and design new services such as those provided for distance learning.

The Georgia Center building on campus provides, in addition to administrative offices for the program, lodging for approximately 300 adults, other conference facilities for up to 1800, two computer labs, as well as studios and production areas for video and WUGA-FM public radio. The Center also provides a variety of other media support services for continuing education and the service function of the University of Georgia, including satellite uplink and downlink communications, and

an electronic classroom connected to the statewide GSAMS system.

EDUCATIONAL PROGRAMS

The Georgia Center provides academic credit courses and academic support programs for students who pursue their education in traditional and nontraditional patterns and provides intensive English language instruction for international students.

The Center also coordinates programs offered by the University as part of a consortium of University System of Georgia institutions at the University System Center — Gwinnett, established by the Board of Regents in 1984. The University offers resident credit upper-level undergraduate and graduate courses and provides continuing education programs at the University System Center — Gwinnett.

American Language Program

See page 130 in the Opportunities and Programs section for information about the American Language Program.

University Studies

See page 134 in the Opportunities and Programs section for information about University Studies.

University System of Georgia Independent Study

See page 136 in the Opportunities and Programs section for information about University System of Georgia Independent Study.

University System Center— Gwinnett

See page 137 in the Opportunities and Programs section for information about University System Center — Gwinnett.

The Georgia Center plans and implements group and individualized instructional programs by working with faculty from the University of Georgia, other institutions of higher education, and practitioners from diversified backgrounds. Georgia Center faculty design and conduct needs assessments, design educational programs in response to identified needs, develop marketing strategies, conduct continuing education programs, and conduct evaluations of the programs. For more information, call (706) 542-6618.

Community Learning Resources

Community Learning Resources provides computer training, non-credit short courses, and independent study courses for professional certification, as well as a wide variety of topics for the adult learner.

Computer training on Windows applications is available through workshops and seminars. Additionally, every semester, over 80 different courses, ranging from Conversational Italian to Preparing for the GRE, are taught in the evening. For more information, call (706) 542-6663.

Program and Conference Development

Program and Conference Development is involved extensively in the development, delivery, and assessment of non-credit instructional programming locally, statewide, regionally, and nationally within a broad range of academic disciplines and occupational competencies including Business Management and HRD, Communications, Education, Family and Consumer Sciences, Agriculture, Humanities and Social Sciences, and professional education in Law, Forestry, Pharmacy, and Veterinary Medicine. Instruction is delivered via workshops, conferences, seminars, certified job-related curricula, and distance learning technologies, which include compressed video, satellite teleconferences, and web-based computer conferences. For more information, call (706) 542-2335.

Educational Services

The Georgia Center develops, produces, and distributes educational media for adult learners around the state, and throughout the nation.



The Georgia Center provides cultural and educational television productions for Georgia Public Television and also operates WUGA-FM, the University of Georgia's public radio station, an affiliate of National Public Radio and Peach State Public Radio.

Through membership in national organizations, the Center has access to high quality teleconferences from more than 200 institutions of higher education. The Center is also a member of the Georgia Statewide Academic and Medical System—a two-way video instructional system that connects the Center with some 250 other sites in the state for the purpose of information and instruction. With state-of-the-art satellite uplink capability, the Center can provide educational services to some 2,000 downlink sites in the state of Georgia and to the entire nation.

The Center delivers and markets a complex, comprehensive media program including not only television and radio, but print design and production as well as self-directed, interactive learning packages. For information, call (706) 542-3554.

Hotel and Operating Services

The Georgia Center provides lodging and food service primarily to adult students attending conferences. However, these services are also available to university guests, parents of students, and alumni. The Center's restaurants, "The Savannah Room" and "The Commons Cafe," are pleased to serve the public as may be on campus. Cultural and entertainment events in the performing arts are open to the public as are gourmet food events presented in connection with these programs. For information, call (706) 542-2600.

Centers and Institutes

CENTER FOR ADVANCED ULTRASTRUCTURAL RESEARCH

Director: Dr. Mark A. Farmer, 542-4080

The Center for Advanced Ultrastructural Research serves the University System by providing a repository of facilities and expertise to assist in pursuing research and

instructional needs employing light, fluorescence, and electron microscopy. Facilities include two TEMs, one SEM, two confocal microscopes, X-ray microanalysis, and image processing and analysis workstations. Formal courses in electron microscopy are offered through the Division of Biological Sciences.

CENTER FOR APPLIED ISOTOPE STUDIES

Director: Dr. John E. Noakes, 542-1395

The Center for Applied Isotope Studies is a multidisciplinary group dedicated to research and development in nuclear analytical methods and system technology. The primary activities of the center are to work cooperatively with the academic, scientific, and industrial communities through programs of applied and basic research. Emphasis is placed on applied research, assisted by a unique array of nuclear analytical tools, directed toward the resolution of critical contemporary problems. One of the highest priorities of the CAIS is to direct its programs of research to address environmental problems and issues, focusing on the development of new analytical methods and systems technologies for scientific and industry application. A state-of-the-art service laboratory is maintained by the CAIS for radiocarbon dating, stable isotope measurements, trace element determinations, and low-level detection of radionuclides for environmental monitoring and assessment. The CAIS also serves as a reference center, available to UGA students and faculty, for research design in nuclear methods. The Center is located at the University's Research Park in the Center for Applied Isotope Studies Building.

CENTER FOR ARCHAEOLOGICAL SCIENCES

Director: Dr. George A. Brook, 542-2856

The Center for Archaeological Sciences promotes and coordinates research between the humanities--archaeology, anthropology, and art history--and the sciences--geology, geography, physics, geochemistry, chemis-

try, and biology. The center coordinates the research of University scholars in fields relating to archaeology and art history, facilitates collaboration with experts outside the University, serves as a resource center of laboratory equipment and technical support for archaeologists and art historians worldwide, and coordinates an interdisciplinary undergraduate and graduate certificate program in archaeological sciences.

CENTER FOR ASIAN STUDIES

Co-Directors: Dr. Thomas Ganschow, 542-2053; Dr. Shanta Ratnayaka, 542-5356

The Center for Asian Studies promotes and guides academic programs and exchanges on Asia for students and faculty. The Asian programs focus on language and area studies and involve faculty and course offerings from various units of the University. Specific activities include the following: (1) expanding and improving instructional programs in Asian languages (presently Chinese, Japanese, and Korean) and area studies (presently East and North Asia) and promoting and facilitating more exchange and involvement of students and faculty with Asia through exchange agreements (presently China and Japan); (2) developing and arranging speakers' and visitors' programs of distinguished Asianists to address and exchange ideas with students, faculty, and community on Asian topics; (3) promoting and facilitating collaborative research activities and programs with Asian scholars and Asian research and educational institutions; (4) developing library, audio-visual, and related instructional and research materials and facilities; and (5) planning and applying for external funding for the expansion of Asian Studies at UGA.

CENTER FOR AUDIT RESEARCH

Director: Dr. Russell M. Barefield, 542-1616

The Center for Audit Research within the School of Accounting seeks to stimulate a continuing commitment to audit research that has practical implications. In the broad context of governmental, internal, and financial statement auditing, the center

encourages practitioners and academicians jointly to explore implementation issues of audit research, and it disseminates research ideas and findings.

CENTER FOR BIOLOGICAL RESOURCE RECOVERY

Director: Lars G. Ljungdahl, 542-7640

The Center for Biological Resource Recovery is composed of investigators from the departments of Biochemistry, Botany, and Microbiology at the University and from the Richard B. Russell Agricultural Research Center. The Center is committed to extending the biotechnology required for the utilization of microorganisms as inexpensive and energy-efficient catalysts for converting our main renewable resource, biomass, to desired products such as fuel and industrial feedstock chemicals. Studies include the physiology, biochemistry, genetics, and ecology of bacteria and fungi that are important in agricultural and industrial processes involving fermentations, forestry, pulp and paper, agriculture, and other biochemical industries.

COMPLEX CARBOHYDRATE RESEARCH CENTER

Co-Directors: Dr. Peter Albersheim, 542-4404; Dr. Alan Darvill, 542-4411

The Complex Carbohydrate Research Center (CCRC), a Department of Energy-funded Center for Plant and Microbial Complex Carbohydrates and the only National Institutes of Health Resource Center for Biomedical Carbohydrates in the country, studies the structure and function of complex carbohydrates from plants, microbes, and animals. CCRC scientists investigate the chemistry, physiology, and developmental and molecular biology of biologically important complex carbohydrates. The center's 45,000-square foot home on Riverbend Road is well-equipped for studying complex carbohydrates. CCRC scientists, representing a broad range of expertise, develop and use advanced analytical techniques to analyze the structure and functions of carbohydrates, including mass spectrometry, nuclear mag-

netic resonance spectroscopy, computer graphics modeling, artificial neural networks, tissue culture, immunocytochemistry, recombinant genetics, and chemical and enzymatic synthesis. The CCRC provides analytical services to scientists, offers four one-week hands-on extramural laboratory training courses each summer, and develops computer software to assist in the study of complex carbohydrates. CCRC personnel are presently engaged in over 100 collaborations with scientists in North America, Europe, and Asia. CCRC faculty hold joint appointments in the departments of biochemistry and molecular biology, chemistry, botany, and plant pathology; students can apply to conduct their graduate research, undergraduate projects, or internships with center faculty. Postdoctoral fellows and visiting scientists from around the world regularly come to the CCRC to gain expertise by working on research projects of interest. The center is supported by federal, state, and industrial funds and has an annual budget of about \$4 million.

CENTER FOR COMPUTATIONAL QUANTUM CHEMISTRY

Director: Dr. Henry F. Schaefer III, 542-2067

The Center for Computational Quantum Chemistry seeks to develop theoretical and computational methods through mathematical models to describe and understand the movement and function of electrons in molecules and to apply theoretical methods to significant problems of broad chemical interest. Some of the theoretical methods under development include the configuration interaction, coupled cluster, and Brueckner methods and associated analytic gradient techniques. Other theoretical work involves density functional theory, the evaluation of electron repulsion integrals, and the treatment of relativistic effects. Currently applications to several areas of chemistry are of special concern: (1) the potential energy hypersurfaces that govern elementary gas-phase chemical reactions, including systems pertinent to combustion; (2) fundamental problems in physical organic chemistry involving, for example,

carbenes and other biradical species and systems such as the [n] paracyclophanes and [10] annulene; (3) organosilicon chemistry, specifically the prediction and understanding of the properties of silicon analogs of common and unknown hydrocarbon compounds; (4) hydrogen bonding in systems as complicated as the guanine-cytosine base pair; (5) the study of molecular ions and ion clusters pertinent to atmospheric chemistry.

CENTER FOR ECONOMIC EDUCATION

Director: Dr. Elmer D. Williams, 542-7265

The Center for Economic Education, an ongoing program of the Department of Social Science Education, with assistance from the College of Business Administration, exists to increase the level of economic literacy in Georgia through the improvement of economics instruction in Georgia schools. The center provides in-service teacher training, develops instructional materials, and encourages innovation in economics education.

CENTER FOR ENVIRONMENTAL BIOTECHNOLOGY

Director: Dr. Robert E. Hodson, 542-7849

The Center for Environmental Biotechnology, a part of the Institute of Ecology, is made up of an integrated team of scientists, staff and graduate students. The center has as major objectives to address basic questions in microbial ecology via a series of laboratory, field and modeling studies, to develop protocols for risk assessment and product advisement using bioengineered organisms, and to develop long-term linkages between university researchers and industrial users of bioengineered microbes and products.

FANNING LEADERSHIP CENTER

Director: Melba Cooper, 542-1108

The Fanning Leadership Center's mission is to develop effective leaders for the betterment of Georgia communities. The

center develops and conducts leadership programs and curricula for potential, emerging, and established adult and youth community leaders, serving communities statewide with training and technical assistance. Collaborating with five other public service units and faculty from several schools and colleges on campus, the Fanning Leadership Center fosters a multidisciplinary approach to leadership development. The center serves as a central source of university-based knowledge and information about community leadership. Its newsletter, published three times annually, reaches over 12,000 readers.

GERONTOLOGY

The University of Georgia has a strong commitment to gerontology training. At present, training in gerontology is primarily at the graduate level although some opportunities for undergraduates are available. The Gerontology Center directs graduate training and awards a Graduate Certificate of Gerontology.

The Gerontology Center. The major purpose of the Gerontology Center is to coordinate and promote activities relating to aging throughout the University. The center's primary responsibilities are to coordinate graduate training and research, and to promote faculty development in gerontology. A Faculty of Gerontology is

associated with the Gerontology Center consisting of approximately 39 faculty members from 28 different academic departments on campus. Dr. Leonard W. Poon is the Gerontology Center Director, and Dr. Everett Lee and Dr. Michael Malone are Assistant Directors.

Undergraduate Opportunities in Gerontology. There are opportunities for undergraduate students to enroll in courses and practica relating to the elderly. Interested students should contact their respective department heads, or Dr. Leonard W. Poon, Chairman of the Faculty of Gerontology and Director of the Gerontology Center (542-3954).

CENTER FOR THE STUDY OF GLOBAL ISSUES, GLOBIS

Director: Han S. Park, 542-6633

The Center for the Study of Global Issues (GLOBIS) serves as a mechanism for coordination and promoting international and interdisciplinary research, service and instruction in global studies. The focus of GLOBIS is on issues that are distinctly international, comparative or transnational in character such as the environment, political and economic development, human rights and social change. The primary goals of GLOBIS are to work toward the establishment of new theories and practical policies to confront the most pressing problems of the day and to enrich the training of students in global studies. These goals are met by conducting research and educational activities that examine recent global economic, political and socio-cultural trends. GLOBIS organizes conferences, sponsors lectures by visiting scholars and hosts scholars wishing to do research at the University of Georgia. GLOBIS also runs the annual summer study abroad program in Verona, Italy, and administers the Certificate in Global Studies to qualified undergraduate and graduate students throughout the University. The Center's programs are located on campus at the University of Georgia and abroad at regional offices in Verona, Italy and Kyoto, Japan. These branch offices operate as GLOBIS'



coordinating centers for the conduct of off-campus research and educational programs conducted in Asia and Europe. Thus, all of the Center's activities are truly international and interdisciplinary because of the participation of UGA faculty and students from many disciplines, but also participation of professional colleagues and students from other countries.

HOUSING AND DEMOGRAPHICS RESEARCH CENTER

Directors: Dr. Anne L. Sweaney, 542-4877; and Dr. Robert J. Cleveland, (912) 743-0370
The Housing and Demographics Research Center (HDRC) provides sound housing research, promotes a more rational regulatory environment for the building community, and disseminates research findings to policy makers, interested parties and the general public. The HDRC was created in partnership with the Research Center of the National Association of Home Builders and was officially recognized as a center in June 1996. It is part of a network of housing research centers located regionally at major research universities. The faculty have garnered support from the Athens-Clarke County Government, Department of Community Affairs, Georgia Department of Human Resources, Georgia Department of Transportation, the National Association of Housing Counselors and Agencies, Inc., and SMART House Limited Partnership, Inc., among others.

CENTER FOR HUMANITIES AND ARTS

Director: Dr. Betty Jean Craige, 542-3966
The Center for Humanities and Arts promotes scholarly inquiry and creative activity in the humanities and the arts by supporting faculty research grants, lectures, symposia, publications, visiting scholars, visiting artists, collaborative instruction, and public programs, exhibitions, and performances. The humanities may be understood as investigation into the philosophical, historical, social, ethical, legal, aesthetic, religious, and ideological implications of our knowledge of the world;

humanistic research includes many kinds of scholarship, such as history, criticism, theory, interpretation, and translation. The arts may be understood as the expression of human experience in various modes, such as literature, theater, music, dance, film, painting, printmaking, sculpture, and design. Under its Humanities-Science interface Initiative, the Center facilitates intellectual exchange and scholarly collaboration among humanists, social scientists, and scientists in the exploration of social and scientific values. In its Initiative for Global Understanding, the center addresses cultural and political issues related to the emergence of a global society.

CENTER FOR INSURANCE EDUCATION AND RESEARCH

Director: Dr. Sandra G. Gustavson, 542-4290
The Center for Insurance Education and Research is designed to conduct research on questions of short- and long-term interest to the insurance community and to provide periodic seminars and conferences on issues facing that industry. The center sponsors continuing education programs for the insurance industry in Georgia and gives financial support to undergraduate and graduate students, as well as faculty of risk management and insurance.

DEAN RUSK CENTER FOR INTERNATIONAL AND COMPARATIVE LAW

Director: Professor Thomas J. Schoenbaum, 542-5140
The Dean Rusk Center for International and Comparative Law was founded in 1977 as part of the School of Law to improve the effectiveness of relations among citizens, private sector entities, and government at the local, state, federal, and international levels. Using advanced electronic, information-processing techniques, the center's professional staff and part-time researchers mobilize university, business, and governmental resources to develop theoretical and practical approaches to improve the efficiency of governance, trade, and investment. On occasion the center also

helps implement the approaches by providing the private and public sectors with essential manpower and information. In the past the Dean Rusk Center has developed several major initiatives for federal action concerning North American cooperation and overseas trade regulation and representation. It has also analyzed new approaches for expanding Georgia agricultural exports. The center publishes research reports, holds conferences, and sponsors research for Georgia citizens that cover fiscal and monetary policy, international arrangements, and domestic affairs.

JAMES M. COX CENTER FOR INTERNATIONAL MASS COMMUNICATION TRAINING AND RESEARCH

Director: Dr. Lee Becker, 542-5023

The Center for International Mass Communication Training and Research serves to facilitate international mass communication training and research programs in which scholars from the United States and foreign countries, students, and mass communication professionals can cooperate. The center helps to coordinate efforts to improve the state of knowledge in the field and to encourage practical training, education, and service projects.

CENTER FOR INTERNATIONAL TRADE AND SECURITY

Director: Dr. Gary K. Bertsch, 542-2985

The Center for International Trade and Security is an interdisciplinary and interuniversity research, teaching, and service project designed to promote more informed trade and security policies and further national and state economic and security interests. Its primary function is to study and produce policy-relevant research on U.S. and international economic and security issues. The center encourages and coordinates collaborative research, teaching, and service related activities within the university, the state, nation, and international community.

CENTER FOR LATIN AMERICAN AND CARIBBEAN STUDIES

Director: Dr. Brent Berlin, 542-9079

Program Coordinator: Dr. Fausto O. Sarmiento, 542-9079

The Center for Latin American and Caribbean Studies (CLAC) coordinates interdisciplinary research, programmatic campus outreach and public service programs dealing with science, environment, and culture of Latin America and the Caribbean. CLACS is a catalyst of scholarly discussion of Hispanic and Latino issues in Georgia and bridges the gap of language and culture with countries of the region, promoting academic exchange programs, summer institutes, field courses, and collaborative agreements among prestigious Latin American universities and UGA. The Center offers a certificate program in Latin American Studies for undergraduate students and Field Travel Awards for graduate students to do research in Latin America. Through lectures, seminars, panels, travelogues, film festivals, Ronda Latina, Hispanic gala and exhibitions, CLACS brings together faculty from all UGA colleges and schools engaged in work related to this region. Through the e-mail list (clacs-l@uga.cc.uga.edu) and the home page (www.uga.edu/~clacs) the Center provides networking and update information for the Latin Americanists on campus.

CENTER FOR MANAGEMENT EXCELLENCE

Director: Dr. Archie B. Carroll, 542-3700

The Center for Management Excellence has as its overall goal managerial and organizational productivity increases for Georgia, the Southeast, and the nation through the improvement of human performance in organizations. Functioning as a part of the Department of Management, the center's overriding purpose is to focus on the human element in productivity and performance. Program emphasis is also on computer assisted managerial decision making (Decision Support Systems and Group Decision Support Systems).

CENTER FOR MARKETING STUDIES

Director: Dr. Thomas W. Leigh, 542-3540

The Center for Marketing Studies, established in 1986, seeks to advance professional marketing education and to identify and develop new programs and methods which will better serve the marketing community's needs for education and information. The Master of Marketing Research Program, a nationally recognized graduate program, is administered by the center which is part of the Terry College of Business. The center also works to maintain and strengthen relations with the business community.

CENTER FOR METALLOENZYME STUDIES (CMS)

Co-Directors: Dr. Michael K. Johnson,

542-1949; Dr. Michael W. Adams, 542-1949

The Center for Metalloenzyme Studies (CMS) was established to encourage cooperative research on related biochemical problems by gathering basic knowledge about the working of metalloenzymes that catalyze a variety of life-supporting reactions like nitrogen fixation, sulfur metabolism, carbon monoxide metabolism, and hydrogen production. Using the latest technologies and state-of-the-art analytical equipment, faculty researchers and postdoctorate and graduate students are able to teach and train in genetics, enzymology, fermentation technology, and anaerobic techniques.

THE PLANT CENTER

Director: Dr. Lee H. Pratt, 542-3732

The Plant Center is designed to foster and support interactions between those members of the University of Georgia research community who share a common interest in cellular and molecular aspects of plant growth and development, in plant genome organization and function, in the application of molecular and genetic tools to improve cultivated plants, and in organisms that interact with plants. The Plant Center hosts a regular seminar series, organizes an annual scientific retreat to encourage the development of interdisciplinary research, and sponsors symposia and technical workshops.

POULTRY DIAGNOSTIC AND RESEARCH CENTER

Director: Dr. S.H. Kleven, 542-5644

The Poultry Diagnostic and Research Center carries out basic and applied research programs on the diseases which are of economic importance to the poultry industry of Georgia. Diagnostic, laboratory, and consultative services are provided to individuals and groups in all phases of poultry production.

CENTER FOR PRIVATE ENTERPRISE

Director: Dr. Dwight R. Lee, 542-1311

The Center for Private Enterprise has as its major mission the furtherance of understanding of the principles of private enterprise. The center engages in research studies that demonstrate the benefits of economic decisions made in a competitive environment and in teaching undergraduate and graduate students the principles of private enterprise, the theoretical underpinnings of market economies, and other appropriate subjects. In addition to its teaching research functions, the center also carries on an active service program involving public lectures and seminars dealing with the private enterprise system

CENTER FOR REMOTE SENSING AND MAPPING SCIENCE

Director: Dr. Roy A. Welch, 542-2359

The Center for Remote Sensing and Mapping Science (CRMS) undertakes research and training in the fields of remote sensing, geographic information systems (GIS), photogrammetry, digital image processing, and computer graphics, particularly as applied to the physical and biological sciences. Typical research topics include quantitative methodologies for measuring soil erosion from agricultural lands by photogrammetric techniques, mapping environmental disturbances from aerial photographs and satellite images, development of integrated image processing/GIS software and advanced technologies for monitoring the earth's surface from digital image data. Close associations are maintained with

remote sensing organizations and scientists in Canada, Europe, South America, and Asia. The CRMS provides technical assistance to universities and to local, state, and federal agencies.

SELIG CENTER FOR ECONOMIC GROWTH

Director: Jeffrey M. Humphreys, 542-4085

The Selig Center serves the state by bringing college resources to bear on economic growth and development. The Selig Center brings widespread recognition to the University of Georgia through its economic forecasts, major studies, publications, press releases, information services, and data products.

The Selig Center houses the Georgia Economic Forecasting Project, which is primarily concerned with projecting Georgia's future growth. The Center holds a series of economic outlook conferences in Albany, Atlanta, Augusta, Brunswick, Columbus, Macon, Savannah, and Thomasville. The conferences and the *Georgia Economic Outlook* publication provide forecasts and detailed commentary on eight economic sectors: agriculture, construction, public utilities, financial markets, manufacturing, services, hospitality, and trade. The Georgia Economic Forecasting Project also forecasts U.S. and regional retail sales, with special emphasis on the back-to-school and holiday shopping seasons, as well as total and black buying power for the U.S., all states, and Georgia's eight MSAs and 159 counties.

The Selig Center is a primary source of economic information for business leaders, the media, government agencies, and the general public. The Center serves as an advisor/consultant to many groups, including the Atlanta Committee for the Olympic Games, the Georgia World Congress Center Authority, the Northeast Georgia Surface and Air Transportation Commission, the 316 Alliance, Inc., *Georgia Trend* magazine, the Athens Convention and Visitor's Bureau, and the Athens Chamber of Commerce.

The Selig Center is a founding member of the Association for University Business and

Economic Research and is a voting member of the National Retail Federation. The Selig Center is an official cooperating agency with the U.S. Bureau of Economic Analysis and serves a similar function for the Construction Statistics Division, U.S. Bureau of the Census.

The Selig Center publishes *Georgia Business and Economic Conditions*, a bimonthly business periodical, and the *Georgia Statistical Abstract*, a comprehensive collection of basic business, economic, and demographic statistics. Visit our home page on the World Wide Web at <http://www.selig.uga.edu>.

CENTER FOR SIMULATIONAL PHYSICS

Director: Dr. David P. Landau, 542-2908

The Center for Simulational Physics functions as a center for research and training in simulational science with emphasis on the use of high performance computing within a distributed, heterogeneous environment. Because of this focus, close interaction with the University Computing and Networking Services is maintained, and collaborative research programs with major institutions in the United States and Europe are developed. Specially designed courses and a weekly seminar series and annual workshop are organized. The center's staff consists of research and adjunct professors, visiting research scientists, and postdoctoral associates.

BUSINESS OUTREACH SERVICES

Director: Hank Logan, 542-6762

Business Outreach Services is devoted to improving Georgia's economy by educating and advising Georgians, both individually and collectively, on ways to better manage their businesses and to further develop the economies of their communities. The innovative, university-based extension service provides assistance through one-to-one consultation, continuing education, and applied research to business-owners and aspiring entrepreneurs. The organization also offers educational opportunities and consultation to community and regionally-

based economic development groups. Supported by the University of Georgia and the U.S. Small Business Administration, business Outreach Services provides business-management and regional economic development assistance to Georgians through its network of 19 offices located throughout the state.

A broad array of services are offered within four general programmatic areas: regional economic development services, minority business enterprises, international expansion support services, and the **Small Business Development Center** program. The staff of professional business consultants, most of whom hold advanced degrees in business and management, not only offer consultation and educational opportunities to help with business start-ups but also aid larger businesses by providing information and consultation on such topics as exporting. Among the many other services offered are extensive research and marketing studies as well as geographical information system maps and statistical reports for individual business-owners, who might be trying to decide whether to expand or relocate, and for community leaders interested in improving local economies.

INSTITUTE FOR AFRICAN AMERICAN STUDIES

Director: Dr. R. Baxter Miller, 542-5197, 542-3071 FAX, www.uga.edu/~IAAS/
The Institute for African American Studies provides a central focus to study the impact of African American contributions upon human culture and social inquiry.

The Institute is dedicated to the production of creative research on the achievements of African Americans and to exciting instruction for a diverse community of thinkers. In addition, the Institute serves as a cultural repository and resource for the citizenry of Georgia.

The Institute offers a certificate upon completion of four courses offered by the Institute, plus an additional two courses approved by the Institute's Director. A major is being submitted to the Board of

Regents. For further information, contact the Director of the Institute for African American Studies.

INSTITUTE FOR BEHAVIORAL RESEARCH

Director: Dr. Rex Forehand, 542-1806
The Institute for Behavioral Research is a multidisciplinary research organization. Its purpose is to encourage a pooling of the expertise of faculty members and graduate students from such areas as Arts and Sciences, Business, Education, and Family and Consumer Sciences. The institute is composed of the Survey Research Center, Center for Family Research, Center for Research on Deviance and Behavioral Health, and Cognitive Studies Group.

INSTITUTE OF COMMUNITY AND AREA DEVELOPMENT (ICAD)

Director: Dr. Joseph W. Whorton, Jr., 542-3350
The Institute of Community and Area Development (ICAD), a service unit of the University of Georgia, has worked for over 30 years helping communities statewide anticipate and plan for growth and its impending changes. Using the resources of the University and working closely with state agencies, local government, and community leaders, ICAD offers a comprehensive work program focusing on growth as it relates to the quality of life of Georgia's citizens. ICAD incorporates the expertise of faculty members from sixteen academic disciplines, each of whom is also skilled and experienced in group process and decision making. Assisting community organizations, local government groups, legislative committees and state agencies, ICAD also offers research and consultation in areas such as community investment, creative problem solving, natural resource management, recreation technical assistance, human resource development, and regional planning and development. ICAD also publishes monographs, reports, manuals, videos, and books designed to aid community developers and public policy officials.

INSTITUTE OF CONTINUING JUDICIAL EDUCATION OF GEORGIA

Director: Mr. Richard D. Reaves, 542-7491

The Institute of Continuing Judicial Education of Georgia, housed at the University of Georgia School of Law, plans and conducts more than 50 seminars each year for the basic professional development and continuing education of judges and other personnel of the Georgia court system. It supports participation by selected personnel of the judicial branch in programs conducted by national training agencies. This past year its programs reached more than 3,000 judges and court support personnel.

INSTITUTE OF CONTINUING LEGAL EDUCATION IN GEORGIA

Executive Director: Mr. Lawrence F. Jones, 369-5664

The Institute's administrative staff is housed in the historic Lumpkin House on Prince Avenue in Athens, Georgia, with the print shop staff in the A.G. Cleveland Building directly behind the Lumpkin House. The Institute was organized in 1965, and is a consortium of the Law Schools of

Georgia, Emory, Mercer, and Georgia State Universities and the State Bar of Georgia. Approximately 155 live and 76 video replayed programs in over 50 areas of the law are conducted each year with an approximate attendance of 21,630 (includes attendance at video replays of ICLE seminars). Two of these programs are held in Athens at the Georgia Center. The other seminars are conducted in cities throughout Georgia. The video replay network makes programs available to the majority of Georgia attorneys with a minimum of travel. The Institute has video tapes available to law firms, local bar associations and colleges to assist attorneys in getting their 12 hours of mandatory training each year. Approximately 2,270 registrants take advantage of this program. More than 20 specialized seminars are transmitted to Atlanta live via satellite. These programs are co-sponsored with national CLE providers such as the American Bar Association and Practicing Law Institute. More than 237 persons attend these co-sponsored programs. The Institute print shop prepares more than 150 publications per year.

INSTITUTE OF ECOLOGY

Director: Dr. C. Ronald Carroll, 542-2968
The Institute of Ecology, long known for its international research reputation, was approved as an academic school of ecology in the Franklin College of Arts and Sciences in 1993. The Institute offers 23 courses for undergraduates and encourages students seeking a B.S. degree in Ecology to complement their classroom education by obtaining credits for internship and research experience.

In addition to the excellent lab facilities on campus, students can obtain field research experience at three local sites administered through the Institute of Ecology. The Horseshoe Bend Research Area adjacent to campus, the McGarity Wetlands Preserve in the flood plain of the Alcovy River, and the Odum Watershed, a self-contained 120 acre (49 hectare) watershed approximately 20 miles from campus near Ila, GA. The Institute of



Ecology maintains collaborative relationships with several other regional research laboratories. The Institute has a long-standing relationship with the Savannah River Ecology Laboratory in Aiken, S.C. Long-term collaborative research takes place at the U.S. Forest Service's Coweeta Hydrological Laboratory in Franklin, N.C.; this research is supported by the National Science Foundation and administered by faculty in the Institute of Ecology. The Institute is presently developing research and academic relationships with the Joseph W. Jones Ecological Research Center in southwest Georgia. The Institute supports research in marine and freshwater ecology, ecological toxicology, evolutionary ecology, conservation biology, landscape ecology, restoration ecology, agroecosystem ecology, systems ecology, and resource management.

CARL VINSON INSTITUTE OF GOVERNMENT

Director: Henry M. Huckaby, 542-2736. The Vinson Institute conducts an interdisciplinary program designed to improve the knowledge and skills of elected and appointed Georgia state and local government officials and others. With expertise in government, public administration, public law, public finance, environmental protection, public management, and personnel administration, Institute faculty formulate and conduct over 850 training programs and conferences each year, offer technical assistance to public officials, and engage in an extensive research and publications program. A program in citizen education offers teachers, students, and citizens of all ages a variety of services that promote better understanding of governmental structure and processes. The Vinson Institute also cooperates with the Department of Political Science in the administration of the Master of Public Administration degree.

INSTITUTE OF HIGHER EDUCATION

Director: Dr. Cameron Fincher, 542-3464. The Institute of Higher Education has been

organized to work with other educational agencies and organizations in the development of higher education. The Institute provides a diversity of services to two-year and four-year colleges in the state and surrounding region, cooperates with other institutions in statewide, regional, and national studies, and participates in numerous planning, development, assessment, and evaluation projects.

SCHOOL OF MARINE PROGRAMS

Director: Dr. Robert E. Hodson, 542-5868. The School of Marine Programs, established by the University in 1992, is responsible for the coordination and general management of the Department of Marine Sciences, Marine Institute, Marine Extension Service, the Georgia Sea Grant College Program, and the Environmental Ethics Certificate Program. The Department of Marine Sciences currently offers undergraduate courses in marine biological, chemical, and physical science. The Interdisciplinary Studies major in Marine Sciences is available to students maintaining a B average or better. Students have access to the extensive field and laboratory facilities of the School of Marine Programs in Athens and at Sapelo Island, Skidaway Island, and Brunswick on the Georgia coast. At the time of this writing, the Franklin College of Arts and Sciences is considering a proposal to offer an undergraduate major leading to the B.S. in Marine Sciences.

The **Marine Institute**, located on Sapelo Island, was established in 1953 and serves as a research facility for resident staff and for campus-based faculty members. Research has centered mainly on basic marsh ecology to provide an understanding of energy flow, cycling of minerals and nutrients through the marshes, and factors regulating the metabolism of the salt marsh ecosystem.

The **Marine Extension Service** addresses problems related to the state's marine resources and provides an outreach program in marine environmental education to students, including K-12, college, post-graduates, and the general public. The Marine Resources Center on Skidaway

Island is the major marine education facility for schools and colleges in the state. At the Brunswick Extension Station, specialists work directly with the fishing and seafood processing industries to solve problems of resource management and utilization.

The **Georgia Sea Grant College Program**, part of the National Sea Grant College Program, was established in 1971. In an approach roughly analogous to that of the Land Grant System in working with agriculture, Sea Grant promotes the wise use of marine resources through a coordinated program of research, education, and advisory services. The University of Georgia was designated as the nation's fifteenth Sea Grant College in 1980.

The **Environmental Ethics Certificate Program (EECP)** offers an interdisciplinary curriculum designed to prepare students to understand the complex nature of problems arising from human interactions with the environment. The faculty and students of the EECP come from a wide range of natural and social sciences as well as the arts, humanities, and law. For further information, contact Peter G. Hartel, Department of Crop and Soil Sciences, 542-0898.

INSTITUTE FOR NATURAL PRODUCTS RESEARCH

Director: Dr. S. William Pelletier, 542-5800

The Institute for Natural Products Research carries out a broad range of research on naturally occurring substances of plant origin, with particular attention to plant species of Georgia and the Southeast. Projects involve research on alkaloids, terpenes, antitumor agents, phytoalexins; the development of new synthetic methods; and the application of modern spectroscopic methods to structure elucidation problems. Research involves the isolation and elucidation of chemical structures of new compounds possibly useful as drugs for the treatment of human disease. The institute serves as a training center for visiting faculty and for postdoctorate and graduate students who are working in natural products research.

JAMES M. COX, JR. INSTITUTE FOR NEWSPAPER MANAGEMENT STUDIES

Director: Prof. Conrad C. Fink, 542-5031

The James M. Cox, Jr. Institute for Newspaper Management Studies, founded in 1990, is designed to assist undergraduate and graduate students in learning management skills, as well as journalistic techniques, necessary for efficient, profitable and socially responsible operation of newspapers in today's complex society. The institute also funds research projects with direct application to management and strategic problems confronting the newspaper industry.

Other Services and Activities

ATHLETIC ASSOCIATION

The University of Georgia conducts a broad program of intercollegiate athletics which includes 20 sports (11 women, 9 men). The University is a member of the Southeastern Conference and the National Collegiate Athletic Association, and abides strictly by the regulations and policies of these groups. Although the faculty has general control of internal policies of the University relating to all phases of intercollegiate athletics, the University of Georgia Athletic Association has been created to facilitate the handling of the business and financial side of the intercollegiate program.

THE UNIVERSITY OF GEORGIA NATIONAL ALUMNI ASSOCIATION

Originally founded in 1834 as the Georgia Alumni Society, the National Alumni Association is today the organization that represents over 185,000 men and women who have shared the Georgia experience. The goals of the Association are to keep alumni involved and connected, to promote the interests and ideals of the institution, and to encourage continuing loyalty.

The day-to-day business of the Association is administered by the Office of Alumni

Relations which is located in the Frank D. Rose Alumni House on South Campus, (706) 542-2251 or 1-800-606-8786, www.uga.edu/~alumni.

UNIVERSITY OF GEORGIA FOUNDATION

The University of Georgia Foundation was organized in 1937 under the sponsorship of the Alumni Society and its officers. The Foundation is a private, non-profit corporation under the laws of the state of Georgia and has a board of trustees, consisting of alumni and friends of the University.

The purposes of the Foundation are to strengthen its financial resources by encouraging gifts to the University, and to receive, hold, and administer such gifts in accordance with the instructions of the donors.

Information regarding the Foundation may be obtained by writing to the Vice President for Development and University Relations, The University of Georgia, Athens, Georgia 30602.

UNIVERSITY OF GEORGIA PRESS

The University of Georgia Press was established in 1938 as the book-publishing arm of the University of Georgia. Since then it has published over 1,300 books in a variety of disciplines including general nonfiction, southern regional studies, literary nonfiction, novels, short story collections, poetry, and scholarly works. Authors published by the press are from the University of Georgia and institutions throughout the world. The press publishes approximately 80 new books per year for the benefit of both scholars and general laypersons.

For further information or a complete list of publications by the press, contact the University of Georgia Press, Athens, Georgia 30602.

UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.

The University of Georgia Research Foundation, Inc. was incorporated under the laws of the State of Georgia as a nonprofit corporation on November 17, 1978.

In a Memorandum of Understanding dated February 26, 1979, the Board of Regents of the University System of Georgia authorized the Research Foundation to serve as the official grantee of all contracts, grants, and gifts for the conduct of sponsored research at the University of Georgia. In turn, the Research Foundation subcontracts with the University.

The Research Foundation was also organized to assist in the transfer of technology developed through the University of Georgia's research programs or by University personnel to the benefit of the University of Georgia and the general public. It works with inventors to obtain appropriate protection for their discoveries, including patents, plant patents, copyrights, trademarks, and plant variety protection certificates. It then works with industry to license the discoveries for commercial development.

Additional information about the Research Foundation may be obtained from the Office of the Vice President for Research, Boyd Graduate Studies Research Center, The University of Georgia, Athens, Georgia 30602.





The University of Georgia Core Curriculum

The core curriculum was established within the University System of Georgia as a means of facilitating the transfer of credit for students at the lower division level as they work toward baccalaureate degrees within University System colleges and universities. The various institutions within the University System, in establishing their core curricula, provide for (1) 60 semester credit hours of which a minimum of 42 are in general education and 18 in major-related courses; (2) assurances that all courses satisfactorily completed in the core curriculum of any unit of the University System will be acceptable and transferable to other units of the University System; and (3) the preservation of the maximum possible amount of institutional autonomy.

AREA A— ESSENTIAL SKILLS— 9 to 10 HOURS

Area A is satisfied by students completing nine hours from the following list. Students must take ENGL 1101 and ENGL 1102 and will select a three-hour math course in consultation with an academic advisor.

ENGL 1101	MATH 1101	MATH 2220
ENGL 1102	MATH 1113	MATH 2220L

AREA B— INSTITUTIONAL OPTIONS— 4 to 5 HOURS

This area will be satisfied by electives selected by the student with approval of an academic advisor.

AREA C— HUMANITIES/FINE ARTS— 6 HOURS

Area C is satisfied by completing two of the following courses. Students may select one course from the Fine Arts list below and one from the Humanities list, or students may select two courses from different departments in the Humanities list.

Fine Arts Electives

ARHI 2100	DANC 2010	DRAM 2130	MUSI 2060
ARTS 2000	DRAM 2000	MUSI 2020	MUSI 2080
ARTS 2050	DRAM 2120	MUSI 2040	

Humanities Electives

CLAS 1000	CMLT 2400	ENGL 2400	RELI 1003
CLAS 1010	EDES 2510	LING 2100	RELI 2004
CLAS 1020	EDES 2520	PHIL 1000	RELI (AFAM) 2005
CMLT 2111	ENGL 2310	PHIL 1500	ROML 2550
CMLT 2210	ENGL 2320	PHIL 2200	SPCM 1100
CMLT 2212	ENGL 2330	RELI 1001	SPCM 1500
CMLT 2220	ENGL 2340	RELI 1002	

AREA D— SCIENCE, MATHEMATICS AND TECHNOLOGY— 10 to 11 HOURS

Area D for Non-Science Majors (including Sociology and Psychology)— 10 to 11 hours

- Select one course from the four-hour science course list and one course from the three-hour science course list or select two courses from the four-hour science course list.
- Select one course from the mathematics or technology course list.

Area D for Science Majors— 11 hours

- Select two courses from the four-hour science course list below.
- Select one course from the mathematics or technology course list.

Area D: four-hour science courses with laboratory

ASTR 1010	CHEM 1211	CSCI 1301-1301L	GEOL 1122L
ASTR 1010L	CHEM 1211L	GEOG 1111	GEOL 1250-1250L
ASTR 1020	CHEM 1212	GEOG 1111L	GEOL 1260-1260L
ASTR 1020L	CHEM 1212L	GEOG 1112	MARS 1010-1010L
BIOL 1103-1103L	CHEM 2100	GEOG 1112L	MARS 1020-1020L
BIOL 1107-1107L	CHEM 2100L	GEOG 1113	PHYS 1111-1111L
BIOL 1108-1108L	CHEM 2211	GEOG 1113L	PHYS 1112-1112L
BTNY 1210-1210L	CHEM 2211L	GEOL 1121	PHYS 1211-1211L
CHEM 1110	CHEM 2212	GEOL 1121L	PHYS 1212-1212L
CHEM 1110L	CHEM 2212L	GEOL 1122	

Area D: three-hour science courses with or without laboratory—some of the following three-hour laboratory science courses have optional laboratories—see Area D four-hour course with laboratory list

ASTR 1010	BTNY 1220-1220L	GEOG 1112	GEOL 1122
ASTR 1020	ECOL 1000-1000L	GEOG 1113	PHYS 1011
BIOL 1104-1104L	GEOG 1111	GEOL 1121	

Area D: three- or four-hour mathematics or technology courses

CSCI 1100-1100L	MATH 1113	MATH 2210	STAT 2210
CSCI 1210	MATH 2200	MATH 2210L	
MATH 1060	MATH 2200L	STAT 2000	

AREA E—SOCIAL SCIENCES—12 HOURS

Students will select four courses from the list below. (Students who have not met the Georgia and U.S. Constitution requirement by examination should enroll in Political Science 1101-1101D.)

AFAM 2000	GEOG 1101-1101D	HIST 2301	PSYC 2100
ANTH 1102	GEOG 1103-1103D	HIST 2302	SOCI 2500
ANTH 2310	GEOG 1125-1125D	HIST 2501	SOCI 2730
ECON 2100	HIST 2050H	HIST 2502	SOCI(AFAM) 2820
ECON 2105	HIST 2111	HIST 2701	SPCM 1010
ECON 2106	HIST 2112	HIST 2702	WMST 1110
ECON 2200	HIST 2221	POLS 1101-1101D	WMST 2010
EDES 1500	HIST 2222	PSYC 1101	

AREA F—COURSES RELATED TO THE PROGRAM OF STUDY—18 HOURS

Lower-division courses related to the discipline of the program of study and courses which are prerequisite to major courses at higher levels. See Programs of Study for specific course requirements.

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Agricultural Economics	Greek
Animal Science	History
Anthropology	Horticulture
Art/Art History	Housing
Biochemistry & Molecular Biology	Interdisciplinary Cognitive Science
Biology	Italian
Botany	Japanese Language and Literature
Cellular Biology	Latin
Chemistry	Linguistics
Child and Family Development	Mass Communication
Chinese Language and Literature	Mathematics
Classical Culture	Music
Comparative Literature	Nutrition
Computer Science	Philosophy
Consumer Economics	Physical Education/Athletic Coaching
Criminal Justice	Plant Pathology
Crop Science	Political Science
Dairy Science	Portuguese
Dance Education	Poultry Science
Drama and Theater	Psychology
English	Religion
Entomology	Russian
Environmental Soil Science	Sociology
Fashion Merchandising	Spanish
Food Science	Speech Communication
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Accounting

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Patricia G. Hoyt
Program Coordinator
PHoyt@cba.uga.edu
(706)542-1616

Department

J. M. Tull School of Accounting
Terry College of Business

Description of the Program

The major in accounting is designed to give the student an understanding of the theory of accounting as it is used in our society. All accounting majors must take 24 hours of required courses. ACCT 5710 and 5720 are allowed to count for the B.B.A.'s "Business Course Outside the Major" in the General Elective Requirements.

Career Opportunities

Students in this major are prepared for accounting careers in private, public or governmental organizations. Accounting education also provides an excellent background for non-business professions such as law, and is a sound basis for advancement to top-level management positions.

Entrance Requirements

Students accepted to Accounting must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

- Accounting majors may transfer only one major-level accounting course into the program. Transfer credit is typically allowed for the equivalent of either ACCT 5200, Audit/Systems I, or ACCT 5400, Tax I. Check with the School of Accounting for any changes to this policy.
- Students should expect to commit to a minimum of four semesters to complete the required courses when they begin the major-level accounting courses.
- Students are expected to have completed the equivalent of ACCT 2101, 2101L, Accounting Principles I, within one year before enrolling in ACCT 5000, Intermediate Accounting I. Any

longer may require a review or "audit" of the Accounting Principles material.

- Students should have completed 60 semester hours of credit, the equivalent of MSIT 3000, Statistical Analysis for Business, and ACCT 2102, Principles of Accounting II, before enrolling in ACCT 5000, Intermediate Accounting I.
- Students are encouraged to participate in Beta Alpha Psi, the national honorary accounting fraternity.
- Completion of MATH 2200, 2200L, Analytic Geometry and Calculus, before the junior year is vital to the timely completion of the degree. Check the course description in this Bulletin for prerequisite requirements.
- All accounting majors should prepare for their job search during the spring and summer before their senior year. Recruiting activities are highlighted with an Accounting Career Day held before fall semester classes. Details are discussed in ACCT 5710 and 5720, Professional Accounting I and II.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

No accounting student is permitted to repeat a major accounting course more than once in order to achieve a grade of C or better, nor is an accounting student permitted to repeat more than two major accounting courses.

Any individual wishing to work in public accounting will be required to take the Certified Public Accountant Examination (CPA Exam). This national exam is given twice each year, in May and in November. Beginning with the May 1998 CPA Exam for the State of Georgia, a first-time candidate must complete a minimum of 150 semester hours of courses which includes a four-year degree, 30 semester hours of accounting courses beyond the principles courses, and 24 semester hours of business subjects.

This ruling requires accounting students to complete an additional year of education. We believe that a student who is going to stay for a fifth year should earn the master's degree along the way. We encourage our students to enroll in either the Master of Accountancy (MAcc) or the Five-Year Program (B.B.A./MAcc). Both approaches require one additional year of study beyond the undergraduate degree and, in either case, the

student is awarded the MAcc degree upon completing the program. Because a senior in the Five-Year Program has the standing of a graduate student, financial aid in the form of graduate assistantships may be available. The course requirements are virtually the same in the MAcc and Five-Year Program. However, Five-Year students are able to "mix and match" their last two years of courses to complete their degree requirements.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: SPCM 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)

Area F: 18

ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090

Major Requirements: 36

FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; ACCT 5000, 5010, 5020, 5100, 5200, 5310, 5400, 5710, 5720

Major Electives: 3

(Refer to College-wide requirements when selecting general electives.)

Choose one course from ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000, or RMIN 4000

General Electives: 21

Five courses in Arts and Sciences

Two courses outside department

Total hours required 120

Scholarships, Internships, Cooperative Education

Scholarships are awarded at the annual Accounting Awards Ceremony, held each spring. These awards are sponsored by various public accounting firms, industry, the Georgia Society of CPAs, and CPA review programs. Students must have completed at least their junior year to be eligible for these awards.

Internships are an integral part of the program; however, they are not required and are not guaranteed to a student. Details are made available to students through the ACCT 5710 and ACCT 5720 courses.

Cooperatives are handled through the University's Career Planning and Placement Office's Co-op Division. Call (706) 542-8421 for details.

Advertising

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Dean M. Krugman

Department Head

dkrugman@uga.cc.uga.edu

(706) 542-4791

Department

Advertising and Public Relations

College of Journalism and Mass Communication

Description of the Program

This program is designed to train students as analysts, creative thinkers and planners in advertising and related fields.

Career Opportunities

Career opportunities include entry-level positions in advertising, marketing communication, promotion and other forms of mediated persuasion.

Entrance Requirements

Applications are accepted only from students who have met minimum requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.50, and English proficiency (recentred SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the College is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the College of Journalism and Mass Communication.

A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching its decisions on how many students may be admitted each semester, the Admissions Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying. Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication. The deadline is 4:00 p.m. on Friday of the second full week of classes.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (includes one hour of PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts. No more than 30 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Advertising major.

A grade of C or higher must be earned in any journalism and mass communication course, or any prerequisite to a course which counts toward satisfaction of requirements for the A.B.J. degree.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E: See Core Curriculum	42
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Preferred course in Area D: STAT 2000	
Preferred courses in Area E: ANTH 1102 or GEOG 1125-1125D	
Area F:	18
Six hours of a foreign language sequence beyond CPC level	
ECON 2105 or 2106	
Choose 9 hours from anthropology, art,	

classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics

Major Requirements:

(Student may take ADPR 3140 as an elective if not taken as a requirement.)
ADPR 3100, 3110, 3120, 3130, 3140 or JRLC 5040, ADPR 5710, 5740
Choose three courses from ADPR 3140, 5010, 5170, 5760, 5790, 5990
Any other course in the College

Major Electives:

Choose 15 hours of upper division electives in no more than two disciplines other than journalism and mass communication, academic assistance, physical education, military, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

General Electives:

Choose 15 hours of courses at any level in any disciplines other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

Total hours required

120

Fees

Some courses require the purchase of a supply card from the University bookstore.

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application during the spring semester that assures them of consideration for any of the scholarships for which they qualify for the coming academic year.

Internships

Students in the College gain practical experience by serving internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Three semester credit hours may be earned for successful completion of an internship if:

1. Advance approval is received from the student's department. (A written request must be submitted and include a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day

- of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
 3. The internship covers a minimum number of weeks of full-time employment as determined by the department.
 4. During the semester of the internship the student registers concurrently for ADPR 5010, which is included in the maximum semester hours of journalism and mass communication credit which may be earned toward the Advertising major.
 5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
 6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Agribusiness

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Steven C. Turner

Associate Professor and Undergraduate Coordinator

sturner@agecon.uga.edu

(706)542-0852

Department

Agricultural and Applied Economics

College of Agricultural and Environmental Sciences

Description of the Program

The agribusiness major prepares students for professional careers in agribusiness marketing, management, and finance. Agribusinesses process and market food and fiber products, supply inputs to agricultural production, and manage agricultural production. Agribusiness majors learn economic principles and strategies for agribusiness marketing and management. Students take courses in agribusiness management, marketing, accounting, economic theory, communications, mathematics, computers, and agriculture. Students learn decision-making skills for agribusiness management, finance, marketing, sales, processing, manufacturing, transportation, and international trade. The agribusiness degree provides career flexibility for students planning to work in private industry or government.

Career Opportunities

The agribusiness program is designed to place students in businesses supplying inputs to agricultural production, processing and transportation, in businesses engaged in food and fiber marketing,

and in agencies that service and regulate agribusiness industries. Agribusiness majors develop skills to start their own businesses. Agribusiness accounts for 15 percent of the nation's total economic activity. The University of Georgia's agribusiness program is expected to play a major role in meeting the agribusiness education needs of the state, region, and nation.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area C: SPCM 1100 or 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: CHEM 1211, 1211L, BIOL 1107-1107L or BTNY 1210-1210L, MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F:

18

AAEC 2580 or ECON 2106; ACCT 2101; ECON 2105; STAT 2000; MATH 2110 or 2210, 2210L; excess hour from Area D

Major Requirements:

24-25

ACCT 2102; AAEC 2020-2020L or CSCI 1100-1100L; AAEC 3040 or 3100; AAEC 3400, 3580-3580L, 3690, 3910, 4980

Major Electives:

27

Select 15 hours from AAEC 2020-2020L, 3010, 3040, 3060, 3100, 3200, 3980, 4040-4040L, 4050, 4510, 4760; AAEC (FINA) 4870; AAEC 4930, 4960; ECON 4030 or an elective approved by the student's advisor

Select six hours of technical agriculture courses from ADSC 2010, 2010L, 3320; CRSS 2010-2010L, 3050-3050L or CRSS(FORS) 3060-3060L, 3270-3270L, 3300; ENGR 3050, 3610; EHSC 3060 or above; ENTO 3740-3740L or above; FORS 3010-3010L or above; FDST 3000 or above; PGEN 3580-3580L; HORT 2000, 3620-3620L; PATH 3530-3530L; POUL 2020-2020L or above

Select six hours of verbal and written communication courses from foreign language, ENGL 3590 or above; TELE 3010 or above; MARK 4200, 4250, 4600; PHIL 2500; SPCM 2400 or above

General Electives:

Upper-division (0-7 hours)

Any level (0-9 hours)

8-9

At least 12 hours of course work must be 4000-level or above.

Total hours required

120

Scholarships

Several scholarships are available to agribusiness majors through the College of Agricultural and Environmental Sciences and the Agricultural and Applied Economics Department. Information about these scholarships can be obtained from Steven Turner (sturner@agecon.uga.edu).

Internships

An internship is required for students pursuing the agribusiness major. Dr Forrest Stegelin (fstegelin@agecon.uga.edu) coordinates the internship program for the agribusiness major.

Minor in Agribusiness

Contact the department for requirements

Agricultural Communications

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Christine Langone

Associate Professor and Program Coordinator

clangone@uga.cc.uga.edu

(706)542-0715

Department

Agricultural Leadership, Education, and Communication

College of Agricultural and Environmental Sciences

Description of the Program

The agricultural communications major prepares students to report agricultural information to audiences such as consumers, legislators, homeowners, farmers, agribusinesses, commodity groups, and governmental agencies. Through positions in fields such as public relations, sales, marketing, journalism, photography, and media, students communicate about the importance of agriculture. Students take courses in agriculture and environmental science along with journalism courses in the College of Journalism and Mass Communication. Each student concentrates in one aspect of communication selecting from journalism, public relations, advertising, or telecommunication courses. In addition, journalism electives allow students to develop a broad range of skills and to develop an individualized program of study. Agriculture

classes may be taken in one area or selected from numerous departments in the college. Many students complete a minor in an agricultural discipline.

Career Opportunities

People with communication skills who also understand scientific agriculture have numerous opportunities. Every land-grant university employs a staff of journalists to communicate its research, extension, and teaching programs. Several branches of the federal government—USDA, Department of State, Department of the Interior—employ agricultural journalists, as do similar departments in state governments. There are several hundred agriculture-related publications in the United States. Agribusinesses, chemical and machinery companies, advertising agencies, and agriculture associations employ people who are trained in writing, advertising, broadcasting, and public relations.

Entrance Requirements and Expectations of Transfer Students

Students must have a minimum 2.5 overall GPA.

Special Requirements

A grade of C or higher is required in journalism and agricultural courses which apply to major-related requirements.

Program Requirements

Semester Core Curriculum

Hours
42

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 1211, 1211L and BIOL 1107-1107L or BTNY 1210-1210L and MATH 2200, 2200L

Area F:

18

AAEC 2580 or ECON 2106; GEOG 1125-1125D; SOCI 1101 or 1600; SPCM 1100; 2 courses from ANTH 1102; CSCI 1100-1100L; GEOG 1103-1103D; MATH 1060; PHIL 2200; PSYC (AFAM) 2150; SOCI 1101, 2090, 2420, 2730; SPCM 1800; STAT 2000

Major Requirements:

29-31

JOUR 3410

Select one Area of Emphasis:

Journalism

JOUR 3310, 3510, 5300, 5580

Advertising

ADPR 3100, 3110, 3120, 3130

Public Relations

ADPR 3520, 3850, 5920; JOUR 3510

Telecommunication

TELE 3010, 3210; two courses from TELE 3110, 3310, 3410, 4250, 4270, 4450

Choose 13 to 14 hours of additional Journalism courses to support area of emphasis
Major Electives: 29-31

Choose 29 to 31 hours of agriculture courses 2000-level or above with advisor's approval from AAEC, ADSC, AGCM, AGRI, BTNY, CRSS, EETH, EHSC, ENGR, ENTO, FDST, HORT, PATH, POUL

Total hours required 120

Scholarships

Several scholarships are available to majors in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships

Students are encouraged, but not required, to complete an internship.

Agricultural Economics

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Steven C. Turner
Associate Professor and Undergraduate Coordinator
sturner@agecon.uga.edu
(706)542-0852

Department

Agricultural and Applied Economics
College of Agricultural and Environmental Sciences

Description of the Program

Agricultural economics applies economic principles to food and fiber production, natural resource management, community and regional economic development, environmental policy, and international trade. Students take courses in economic theory, econometrics, statistics, accounting, technical agriculture, and the physical and biological sciences. A flexible offering of electives allows students to tailor the agricultural economics major to meet their particular interests and career objectives. Agricultural economics provides a strong theoretical background for those entering graduate schools in agricultural economics, economics, and professional schools in law and business administration.

Career Opportunities

Agricultural economics prepares students for careers in applied economics, resource management, public program analysis, economic forecasting, and economic research. Agricultural economics graduates are now working in commercial agriculture, food and fiber industries, resource and

environmental management agencies, economic development agencies, state and local governments, and international trade organizations. Position responsibilities include resource management, finance, administration, economic research, and policy analysis with private, non-profit, and public agencies at the state and federal levels. Job opportunities are expanding for graduates with skills in applied economics.

Program Requirements

Semester Core Curriculum Hours
Area A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area C: SPCM 1100 or 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: CHEM 1211, 1211L, BIOL 1107-1107L or BTNY 1210-1210L and MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

AAEC 2110 or ACCT 2101; AAEC 2580 or ECON 2106; ECON 2105; STAT 2000; MATH 2110 or 2210, 2210L; excess hour from Area D

Major Requirements: 23

AAEC 3040 or 3100; AAEC 3060, 3400, 3580-3580L, 3610-3610L, 3690; ECON 4020

Major Electives: 18

Select 12 hours with at least 9 hours from AAEC courses: AAEC 2020-2020L, 3010, 3100, 3200, 3610-3610L, 3910, 3980, 4040-4040L, 4050, 4210, AAEC (EHSC) 4250, 4650, 4710, 4760, 4800-4800L, AAEC(FINA) 4870, 4930, 4960, 4980; ECON 4000, 4030, 4040, 4150, 4200, 4350, 4400, 4450, 4550, 4600, 4650, 4700; EHSC 3060, 4150; ENGL 3590; FINA 3000, 4000, 4200, 4280, 4310, 4320, 4380, 4420, 4600, 4810; FORS 3300, 4800-4800D, FORS(RLST) 5400-5400L, 5410, 5820, 5850; GEOG 3620, 4620, 4630, 4650, 4670, 4810; LEGL 2700, 4900; MGMT 3000, 4000, 4250, 4600, 4800; MATH 2500; MARK 4100; MSIT 3000, 5130; POLS 4630; REAL 4000; RLST 4870; RMIN 4000; STAT 4210; or an elective approved by the student's advisor

Select two technical agriculture courses from ADSC 2010, 2010L, 3320; CRSS 2010-2010L, 3050-3050L or CRSS (FORS) 3060-3060L, CRSS 3270-3270L,

3300; EHSC 3060 (or higher); ENTO 3740-3740L (or higher); ENGR 3050 (or higher); FORS 3000-3000L (or higher); FDST 3000 (or higher); PGEN 3580-3580L; HORT 2000, 3620-3620L; PATH 3530-3530L (or higher); POUL 2020-2020L

General Electives: 19
Upper division (4-10 hours)
Any level (9-15 hours)

At least 12 hours of course work must be 4000-level or above.

Total hours required 120

Scholarships

Several scholarships are available to agricultural economics majors through the College of Agricultural and Environmental Sciences and the Agricultural and Applied Economics Department. Information about departmental scholarships can be obtained from Steven Turner (sturner@agecon.uga.edu).

Internships

Internships are available, but not required, for students pursuing the agricultural economics major.

Minor in Agricultural Economics

Contact the department for requirements.

Agricultural Education

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Persons

Maynard J. Iverson

Associate Professor and Program Coordinator
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(706)542-1204

Ray V. Herren

Associate Professor
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Department

Agricultural Leadership, Education, and Communication
College of Agricultural and Environmental Sciences

Description of the Program

Students in Agricultural Education complete an approved program of course work in the agricultural sciences and teacher education. A one credit school practicum involves observation of agricultural instruction at schools across the state. The practicum helps students understand the job of teaching agriculture, make career choices and select a student teaching center. Apprentice

teaching (student teaching) is carried out in an approved secondary school center under the daily supervision of an experienced, successful teacher of agriculture. Supervision is also provided by University of Georgia Agricultural Education faculty.

Career Opportunities

Agricultural Education prepares students for positions in teaching agriculture at the middle school, high school, post-secondary and adult levels. Graduates are eligible for teacher certification in most states, under reciprocity agreements with the State of Georgia. Employment outlook is excellent; there is a national shortage of teachers of agriculture. For the past decade, Georgia has had two to three job openings for every graduate of the program. Graduates are also eligible for a variety of related jobs in agricultural business, industry, extension, and other government agencies.

Entrance Requirements

Courses offered in the College of Education require admission to teacher education and a 2.5 UGA GPA.

Expectations of Transfer Students

Students are required to have enrolled in the first course in the professional sequence, EAGR 4340/6340, and be admitted to teacher education prior to continuation in the professional sequence (See Regents' requirements for admission to teacher education in College of Education section).

Special Requirements

Students are expected to enroll in EAGR 4010/6010, Leadership Seminar, each semester that they are on campus. A passing grade on the Agricultural Education version of the national Praxis exam (for technical competence) is also required for certification.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L or BTNY 1210-1210L; CHEM 1211, 1211L; and MATH 2200, 2200L	
Area F:	18
EFND 2030; EPSY 2020; choose 12 hours from AAEC 2580; ADSC 2010; AGRI 1010; BIOL 1108-1108L or BTNY 1220-1220L; CHEM 1212, 1212L; CRSS 2010-2010L; CSCI 1100-1100L; HORT 2000; POUL 2020-2020L	

Major Requirements:	21
Choose 21 hours from EAGR 4010 (4 hours), 4340, 4350, 4360, 5460 (12 hours); EOCS 5550	
Major Electives:	31
Select 31 hours from AAEC 3010 or 3040 or 4210; ADSC 3260-3260L or 3270-3270L or 3320 or 3600-3600L or 3610-3610L; BCMB(BIOL)(CHEM) 3100; CRSS 3050-3050L; ENTO 3740-3740L; FORS 3300 or 5730; HORT 3500-3500L and 3510-3510L or 3620-3620L or 3630-3630L or 4050; PATH 3530-3530L; PGEN 3580-3580L; POUL 3600	
General Electives:	8
Any level	
Total hours required	120

Scholarships

Several scholarships are available to majors in the College of Agricultural and Environmental Sciences. For more information, contact the office of Academic Affairs in the College. Other scholarships are available through the National FFA Foundation.

Agricultural Engineering

Degree

Bachelor of Science in Agricultural Engineering (B.S.A.E.)

Contact Person

E. Dale Threadgill, P.E.
Department Head
tgill@bae.uga.edu
(706)542-1653

Department

Biological and Agricultural Engineering
College of Agricultural and Environmental Sciences

Description of the Program

The Bachelor of Science in agricultural engineering (B.S.A.E.) curriculum at the University of Georgia is basically a general engineering program. This versatile engineering program combines the principles of mechanical, electrical, civil, and chemical engineering to prepare men and women for professional careers in both agricultural and non-agricultural industries. Activities in these careers may involve design of machinery and equipment (mechanical); structural and environmental design (civil); water and soil management (civil); processing, manufacturing, and quality measurement (mechanical, chemical, and electrical); and controls, energy use, microelectronics, and electrical machines and equipment (electrical).

This four-year professional engineering curriculum provides graduates with a general engineering degree that includes the basic sciences, humanities, social sciences, engineering sciences and courses in engineering design and analysis. All students complete courses in the basic engineering sciences such as statics, dynamics, strength of materials, fluid mechanics, electric circuits, heat transfer, and thermodynamics. They also select from intermediate engineering science and design courses in mechanism design, structural design, physical unit operations, management of structural environments, measurements, and electronics. Fifteen credit hours are selected by students during their junior and senior years to develop a desired *engineering emphasis* in one of the following areas: (1) Electrical and Electronic Systems, (2) Mechanical Systems, (3) Natural Resource Management, (4) Process Operations, or (5) Structural Systems. The development of both technical and communication skills is stressed throughout the program. The program establishes an interrelationship between the engineering profession and society.

The B.S.A.E. degree program is accredited by the Accrediting Board for Engineering and Technology (ABET) and graduating seniors must complete the Fundamentals of Engineering examination prior to graduation. Successful completion of this exam qualifies the student for Engineer in Training registration which is a prerequisite for the Professional Engineer registration.

Career Opportunities

The general engineering nature of the agricultural engineering program enables graduates to take advantage of employment opportunities related to agricultural, civil, mechanical, electrical, and food engineering. The versatility of this degree program provides a broad spectrum of career alternatives in engineering design, development, testing, process control, and management. Typical employers of graduates are involved in food processing (e.g., General Foods, Gold Kist, Proctor & Gamble); electrical, electronics, and communications (e.g., Southern Bell, General Electric, Logic Technologies, Westinghouse); environmental engineering (e.g., CH²M Hill, USGS, EPA); mechanical equipment (e.g., Carrier Transicold, John Deere, FMC); utilities (e.g., Georgia Power Co., Jackson EMC, Duke Power Co.); paper production (e.g., Georgia Pacific, Weyerhaeuser); construction and consultants (e.g., Golder and Associates, Haliburton); textiles (e.g., Milliken Industries); and federal, city, and state agencies (e.g., Warner Robins Air Logistics Center, USDA-SCS).

Expectations of Transfer Students

Students transferring into Agricultural Engineering must have an overall grade point average of 2.5 or higher.

Special Requirements

All students must earn a grade of C or better in all required mathematics and physics courses and ENGR 1120, 2110, 2120, 2130, 2140, 2150, and 2170. Competency in a procedural computer programming language, such as C++, is expected.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 2200, 2200L

Preferred courses in Area C: SPCM 1100 and one course from CMLT 2210, 2220, 2400; ENGL 2310, 2320, 2330, 2340, 2400 (take under general electives if not taken in Area C)

Preferred courses in Area D: BIOL 1107-1107L and CHEM 1211, 1211L and MATH 2210, 2210L (take under general electives if not taken in Area D)

Area F:

18

CHEM 1212, 1212L; MATH 2500, 2700; PHYS 1211-1211L, 1212-1212L

Major Requirements:

38

ENGR 1120, 1920, 2110, 2120, 2130, 2140, 2150, 2170, 2920, 3140, 3150, 4230, 4240, 4920

Major Electives:

30

Choose 15 hours from ENGR 2500, 3120, 3270, 3300, 3410, 3540, 3610, 4620

Choose one of the following Areas of Emphasis: (15 hours)

Electrical and Electronics Systems

ENGR 3210, 4210, 4220, 4250; select 3 hours from ENGR 4270, 4280, 4480, 4540, 4940

Mechanical Systems

ENGR 4300, 4340, 4350; select 6 hours from ENGR 4220, 4250, 4330, 4360, 4370

Natural Resource Management

ENGR 3420, 3440, 4420; select 6 hours from CRSS 3050-3050L, 4600-4600L; ENGR 4480, 4940; FORS 4120

Process Operations

ENGR 4220, 4550, 4940; select 6 hours from ENGR 3210, 4250, 4540; FDST 4010, 4050-4050L, 4060-4060L, 4090-4090L; FORS 3500, 4500-4500L, 4510-4510L; MSIT 5130; POUL(FDST) 3860

Structural Systems

ENGR 4610, 4630; select 9 hours from ENGR 3420, 3440, 4220, 4250, 4330, 4350, 4370, 4420, 4480

Total hours required

130

Scholarships

The following scholarships are available for B.S.A.E. majors in the Biological and Agricultural Engineering Department: Bruce E. Dixon Scholarship; Bertram S. Reid Scholarships; Georgia Power Freshmen Scholarship; Georgia Section ASAE Scholarship; Rudie Driftmier Scholarship; Goodloe Yancey Scholarships; B. Derrell McLendon Scholarship; Robert H. Brown Scholarship.

Cooperative Education

The Biological and Agricultural Engineering Department offers its students an opportunity to integrate academic instruction and real-life applications through a cooperative plan of education. Usually beginning after the freshman year, the plan allows for alternating semesters of full-time, off-campus professional work experience in designated industries, agencies and laboratories arranged by the Department. The student is considered by the University to be in an uninterrupted program of study since the student is enrolled for academic credit while on work-experience semesters. While co-op placement does not imply permanent employment of the student upon graduation, it does provide an extended period for mutual evaluation by the student and the cooperating industry, enhancing the possibility of permanent employment.

Animal Health

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Walter Britton

Professor and Undergraduate Coordinator

wmbritt@uga.cc.uga.edu

(706) 542-1366

Department

Poultry Science

College of Agricultural and Environmental Sciences

Description of the Program

The degree program, the Bachelor of Science in Agriculture with a major in animal health, was begun in 1988. This program was designed, in close cooperation with the College of Veterinary Medicine, specifically for students entering veterinary school after three years of pre-veterinary study in the College of Agricultural and Environmental Sciences.

Students who enter the College of Veterinary Medicine upon completion of the degree requirements are eligible to receive the B.S.A. degree with a major in animal health after successfully completing the first year of study in the College of Veterinary Medicine. Alternatively, students may also use the senior year to complete requirements for a B.S.A. degree in an appropriate major in the College of Agricultural and Environmental Sciences. See section on pre-veterinary medicine programs.

Career Opportunities

This program is designed for students who wish to study veterinary medicine.

Expectations of Transfer Students

Transfer students with 60 or more credit hours must have a 2.7 overall grade point average for admission.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred course in Area C:</i> SPCM 1100 or 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L	
<i>Preferred courses in Area E:</i> ANTH 1102 and ECON 2106 (take under general electives if not take in Area E)	
Area F:	18
ADSC 2010, 2010L; BIOL 1108-1108L; CHEM 1212-1212L; PHYS 1111-1111L; POUL 2020-2020L	
<u>Major Requirements:</u>	21-24
ADSC 3300-3300L or POUL 3750; BCMB(BIOL)(CHEM) 3100; 9 hours of Animal Production or Internship; select 6-8 hours from the following with assistance of advisor: CBIO 3000-3000L; CBIO(BIOL) 3300, 3400; GENE(BIOL) 3204 or PGEN 3580-3580L; MIBO 3500, 3510L; POUL 3720, 3800-3800L	
<u>Major Electives:</u>	12
CHEM 2211, 2211L, 2212, 2212L; PHYS 1112-1112L	
<u>General Electives:</u>	24-27
Upper division (16-18 hours)	
Any level (8-9 hours)	
<i>Total hours required</i>	120

Scholarships

Several scholarships are available to students in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships

Internships are available but not required.

Animal Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Robert S. Lowrey

Professor and Undergraduate Coordinator

rlowrey@arches.uga.edu

(706)542-1852

Department

Animal and Dairy Science

College of Agricultural and Environmental Sciences

Description of the Program

The animal science curriculum is designed to provide technical and applied instruction in the biological, physical, and economic aspects of beef, swine, sheep, and horse production. It includes the selection, breeding, nutrition, reproduction, growth, and management of livestock in the production of meat and milk, or of horses as work or companion animals. Courses of a more basic nature may be emphasized by students who desire careers in science-related fields or who wish to pursue graduate or professional study. This major is highly recommended for persons wishing to enter a program of study in veterinary medicine.

Career Opportunities

The curriculum in animal science is designed to prepare students for careers as livestock producers, farm managers, animal science specialists, county extension agents, vocational agriculture teachers, or research technicians. Students are also qualified for careers in agribusiness with meat processing companies, feed manufacturers, breed associations, animal health companies, livestock marketing organizations, livestock equipment and supply companies, livestock publications, or related fields.

Expectations of Transfer Students

Students transferring to this major should have taken the following courses: BIOL 1107-1107L, 1108-1108L; CHEM 1211, 1211L, 1212, 1212L; Organic Chemistry; MATH 1113.

Special Requirements

Students must have an overall 2.0 GPA in major courses.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100 (take under general electives if not taken in Area C)

Preferred courses in Area D: BIOL 1107L, CHEM 1211, 1211L, and either CSCI 1100-1100L, MATH 2200, 2200L, or STAT 2000

Area F:

18

ADSC 2000-2000L, 2010, 2010L; BIOL 1108-1108L; CHEM 1212, 1212L; CHEM 2100, 2100L or 2211, 2211L

Major Requirements:

39-41

ADSC 3110, 3300-3300L, 3310-3310L, 3400-3400L, 3810, 3910, 4010

Choose two courses from ADSC 3600-3600L, 3610-3610L, 3620-3620L, 3630-3630L, 3640-3640L

Choose two courses from ADSC 3200-3200L, 3420; ADSC(FDST) 3650-3650L

Choose one course from ADSC 3180-3180L, 3210-3210L, 3230-3230L, 3260-3260L; EBUS 4010; ENGL 3590; SPCM 2100

Choose one course from AAEC 2580; ECON 2106

Choose one course from CRSS 2010-2010L, 3050-3050L

Major Electives:

10-12

Choose 10 to 12 hours from the following:

AAEC 2020-2020L or higher; ADSC 2300 or higher; BCMB (BIOL) (CHEM) 3100; CBIO 3000-3000L; CBIO (BIOL) 3300, 3400; CSCI 1100-1100L; CRSS 2010-2010L, 3050-3050L, 4260; EETH(AGRI) 4190; GENE (BIOL) 3204; MATH 2200, 2200L; MGMT 2090, 2090L; MIBO 3500, 3510L; PGEN 3580-3580L; PHYS 1111-1111L, 1112-1112L; POUL 2020-2020L, 3600; VPHY 3100

General Electives:

9

Upper division (0-9 hours)

Any level (0-9)

Total hours required

120

Scholarships

Scholarships are available to Animal Science majors through both the College of Agricultural and Environmental Sciences and the Animal and Dairy Science Department.

Internships

All Animal Science majors are required to complete an internship as a part of the undergraduate program requirements.

Areas of Emphasis in Business and Industry, Industry Information, Meat Science, and Science/Pre-Veterinary

Contact the department for requirements.

Minor in Animal Science

Contact the department for requirements.

Anthropology

Degree

Bachelor of Arts (A.B.)

Contact Person

Michael D. Olien

Undergraduate Advisor

molien@uga.cc.uga.edu

(706)542-1478

Department

Anthropology

College of Arts and Sciences

Description of the Program

The program requires one course in each of the five core areas (cultural anthropology, archaeology, biological anthropology, applied anthropology and a culture area) and four additional three-semester-hour elective anthropology courses. Please note that courses cross-listed with other departments should be taken under the ANTH prefix.

Career Opportunities

Career opportunities are limited with only an A.B. Degree, but include opportunities in contract archaeology, jobs that involve working with other cultures, and employment requiring general skills of social science.

Entrance Requirements

Students must meet the current requirements for admission into the College of Arts and Sciences and must have taken ANTH 1102 or ANTH 2120H, with a grade of C or better.

Expectations of Transfer Students

Six to nine semester credit hours of anthropology, beyond ANTH 1102, may be accepted.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18
ANTH 1102
 Choose 15 hours from ECOL 1000-1000L, POLS 1101-1101D, STAT 2000, 2210, or any 1000 or 2000-level courses in GEOG, HIST, LING, PSYC, RELI, SOCI, and WMST

Major Requirements: 27
 Choose one course each from the following anthropology core area lists:

Cultural Anthropology
 ANTH 3530, 4000, 4050, 4070, 4550, 4630; ANTH(BTNY)4300-4300L; ANTH (LING) 3080, 4090

Archaeology
 ANTH 2310, 3220, 3250, 3270, 3280, 4200, 4240, 4310; ANTH(ECOL)4210, 4290; GEOL(ANTH) 4340, 4700

Biological Anthropology
 ANTH 2070H-2070L, 3060, 3090, 4590, 4710, 4740, 4790

Applied Anthropology
 ANTH 3540, 4040, 4540-4540L, 4560, 4570, 4580-4580L

Culture Areas
 ANTH 3100, 3260, 3410, 3430, 4020, 4480; ANTH(HIST) 4470

Choose any four additional 3-hour ANTH courses

Major Electives: 3
 Fourth semester of any foreign language

General Electives: 30
 (Refer to College-wide requirements when selecting general electives.)
 Upper division (12-24 hours)
 Any level (6-18 hours)

Total hours required 120

Minor in Anthropology
 Contact the department for requirements.

Art

Degree
 Bachelor of Fine Arts (B.F.A.)

Contact Person
 Tom Polk
 tpolk@arches.uga.edu
 Undergraduate Coordinator
 (706)542-1574

Department
 Lamar Dodd School of Art
 College of Arts and Sciences

Description of the Program

Students are encouraged to develop a personal style in the area or the materials they specialize in.

The B.F.A. candidate should achieve an insight into and an understanding of the nature of the materials they choose to work with. In most areas, students are required to present an exhibition before graduation that demonstrates their achievement in developing a mature and cohesive body of work.

Specific course requirements vary for each of the following areas of specialization: Ceramics, Digital Media, Drawing, Fabric Design, Graphic Design, Interior Design, Jewelry and Metal Work, Painting, Photography, Printmaking, Scientific Illustration, and Sculpture. Contact the School of Art or visit the UGA Bulletin web site (bulletin.uga.edu) for a list of requirements for each area.

Career Opportunities

Art majors enter the profession to pursue both fine art practice and applied art in business as well as in education and graduate study. Students are prepared for work in technical as well as creative areas of art and design. Each specialization offers a variety of employment opportunities in areas ranging from mass communications to the service industries.

Entrance Requirements

Admission to the B.F.A. Program will be based on GPA and a portfolio review after completion of foundation studio courses in Area F of the Core Curriculum. The specific studio courses required depend on the student's proposed area of specialization.

Expectations of Transfer Students

Transfer students must have a 2.5 grade point average and successfully pass the Portfolio Review. Aspiring B.F.A. candidates who transfer from within the University System of Georgia are urged to fulfill Area F of the Core Curriculum with art courses equivalent to the courses required in Area F by UGA.

Special Requirement

A minimum cumulative average of 2.0 and a C or better in all art courses are required for graduation.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Area F:	18
ARHI2100; ARST 1050, 1060, 1070, 1080; additional 3-hour ARST course determined by area of specialization	
<u>Major Requirements:</u>	48-60
48-60 hours of Art courses determined by area of specialization	

Major Electives:	0-12
0-12 hours of electives determined by area of specialization	
Total hours required	120

Fees

Fees are required to cover the expense of materials in some studio courses.

Scholarships

The Kuzmicki-McCutchen Scholarships are awarded to high school seniors who plan to major in art at the University of Georgia. Submission of portfolios, letters of recommendation and transcripts occurs in December. Contact the School of Art for details.

The Albert Christ-Janer and Lamar Dodd Scholarships are awarded to high school seniors in conjunction with the annual School Art Symposium for study the following year.

The scholarships listed below are open to any full-time student majoring in any area of the visual arts who has completed a minimum of one year of study in the School of Art. Preference is generally given to students who will be juniors or seniors but in the final analysis, all factors are taken into consideration before a decision is reached. Applications will be screened by an appointed faculty committee which will have sole discretion in determining recipients of the awards. Recipients of scholarships may be required to participate in a group exhibition in the Visual Arts Gallery.

Mary Rosenblatt Scholarships: Established primarily to assist students who are planning a career in teaching; however, they are not limited to students majoring in art education.

Betty Cabin Scholarships: To assist worthy students majoring in any program of the school.

Vince Dooley Scholarships: To assist worthy students majoring in any program of the school.

Minor in Art

Contact the department for requirements.

Art/Art Education

Degree

Bachelor of Fine Arts (B.F.A.)

Contact Person

Carole Henry

Professor in Charge

ckhenry@arches.uga.edu

(706) 542-1624

Department

Lamar Dodd School of Art

College of Arts and Sciences

Description of the Program

The B.F.A. in Art Education prepares art teachers at the elementary, middle, and high school levels to promote the central role of the visual arts in the lives of their students. The successful B.F.A. candidate will be able to demonstrate a professional knowledge of fundamental art concepts, materials, and teaching techniques.

Students are required to take 45 hours in art courses beyond the 18 that are required in Area F of the core curriculum, including painting, printmaking, ceramics, sculpture, a studio sequence, 9 hours of studio electives, 6 hours in Art Education, and 9 hours in Art History at the 3000-4000 levels. In addition, they must take 18 hours in professional Education including 9 in Student Teaching.

Career Opportunities

Students majoring in Art Education not only have the same opportunities as any art major, but also have additional opportunities in a wide range of teaching situations. Virtually all of the graduates desiring to teach find teaching positions. Salaries usually begin around \$24,000 and go beyond \$45,000. The primary positions available are as art teachers at the elementary, middle and secondary levels in both private and public schools. As the urban areas are most sought after, it is sometimes easier to find positions in the outlying areas. There are also some positions available in various institutions such as hospitals, day care centers, homes for the elderly, scout groups, camps, art centers, museums and church-related programs.

Entrance Requirements

Requirements include an overall 2.5 grade point average; completion of Area F courses in the core curriculum, including EFND 2030 and EPSY 2020 with a 2.7 GPA; and a 300-word statement outlining reasons for wanting to become an art teacher. The student must also be admitted to Teacher Education. Admission to and retention in the Art Education Program will be determined by review of the student's performance and the availability of placements for student teachers.

Expectations of Transfer Students

Transfer students must have a 2.5 grade point average and successfully pass the Portfolio Review. Aspiring B.F.A. candidates who transfer from within the University System of Georgia are urged to fulfill Area F of the Core Curriculum with art courses equivalent to the courses required in Area F by UGA.

Special Requirements

The B.F.A. in Art Education requires 126 hours, which is six hours more than the University norm

of 120 hours. The student must also be admitted to Teacher Education. A 2.5 GPA must be maintained to remain in the Teacher Education program. No grade below C in major courses will be accepted.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

ARHI 2100, 1050, 1060, 1070, 1080, ARST elective

Major Requirements: 66

ARED 5350, 5360, 5460 (9 hours), 5470; ARTS 2050; EFND 2030; EPSY 2020; SPED 2000; 9 hours ARHI upper division courses (ARHI 4010 recommended); 3 hours ARST Painting courses; 3 hours ARST Printmaking courses; 3 hours ARST Ceramics courses; 3 hours ARST Sculpture courses; 6 hours ARST Studio sequence; 9 hours ARST Studio electives

Total hours required 126

Fees

Fees are required to cover materials in some studio courses.

Scholarships

W. Robert Nix Art Education Award: To recognize and assist deserving Art Education students. The Awards are given during the academic term that the students are enrolled for their "Student Teaching."

The Kuzmicki-McCutchen Scholarships are awarded to high school seniors who plan to major in art at the University of Georgia. Submission of portfolios, letters of recommendation and transcripts occurs in December. Contact the School of Art for details.

The Albert Christ-Janer and Lamar Dodd Scholarships are awarded to high school seniors in conjunction with the annual School Art Symposium for study the following year.

The scholarships listed below are open to any full-time student majoring in any area of the visual arts who has completed a minimum of one year of study in the School of Art. Preference is generally given to students who will be juniors or seniors but, in the final analysis, all factors are taken into consideration before a decision is reached. Applications will be screened by an appointed faculty committee which will have sole discretion in determining recipients of the awards. Recipients of

scholarships may be required to participate in a group exhibition in the Visual Arts Gallery.

Mary Rosenblatt Scholarships: Established primarily to assist students who are planning a career in teaching; however, they are not limited to students majoring in art education.

Betty Cabin Scholarships: To assist worthy students majoring in any program of the school.

Vince Dooley Scholarships: To assist worthy students majoring in any program of the school.

Art/Art History

Degree

Bachelor of Arts (A.B.)

Contact Person

Andrew Ladis

Area Chair

aladis@arches.uga.edu

(706)542-1590

Department

Lamar Dodd School of Art

College of Arts and Sciences

Description of the Program

Students are expected to achieve a basic knowledge of the history of art within the broader context of social, intellectual, and cultural history. Major-related courses in Area F of the core curriculum include the introductory art history (ARHI 2100 or 2110H, Monuments of World Art) and 15 hours of introductory or survey courses from specified areas, 30 hours of upper level art history courses, and 18 hours of major electives within the humanities, sciences, and social sciences excluding studio art and art history but including a foreign language through the fourth semester.

Career Opportunities

An undergraduate degree in art history provides the student with a broad liberal arts education; it can, therefore, be used as the basis for further study in many fields leading to a variety of professional careers. The student who wishes to pursue a career in art history should consider graduate studies on the M.A. or Ph.D. level. With such advanced degrees, professional employment opportunities include college and university teaching, museum and research positions, as well as careers in restoration and conservation.

Expectations of Transfer Students

Transfer students are urged to take a foreign language.

Special Requirements

Students must earn at least a C in all major courses.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

ARHI 2100

Fifteen hours of introductory or survey courses selected from the following areas: AFAM, ANTH, ARST, CLAS, CSCI, ECON, GEOG, HIST, MATH, POLS, PHIL, PSYC, RELI, SOCI, WMST, Biological and/or Physical Sciences, Theatre History/Literature, Music History/Literature, and World Literature

Major Requirements: 30

Choose 30 hours of ARHI courses at the 3000/4000 level

Major Electives: 18

Choose 18 hours of humanities, sciences, and social sciences courses in the College of Arts and Sciences excluding ARST and ARHI. Include a second literature course and foreign language through the fourth semester.

General Electives: 12

(Refer to College-wide requirements when selecting general electives.)

Upper division (at least 9 hours if not taken in major electives)

Any level (3 hours or more)

Total hours required 120

Fees

Fees are required to cover the expense of materials in some studio courses.

Scholarships

The Kuzmicki-McCutchen Scholarships are awarded to high school seniors who plan to major in art at the University of Georgia. Submission of portfolios, letters of recommendation and transcripts occurs in December. Contact the School of Art for details.

The Albert Christ-Janer and Lamar Dodd Scholarships are awarded to high school seniors in conjunction with the annual School Art Symposium for study the following year.

The scholarships listed below are open to any full-time student majoring in any area of the visual arts who has completed a minimum of one year of study in the School of Art. Preference is generally given to students who will be juniors or seniors but, in the final analysis, all factors are taken into consideration before a decision is reached. Applications will be screened by an appointed faculty

committee which will have sole discretion in determining recipients of the awards. Recipients of scholarships may be required to participate in a group exhibition in the Visual Arts Gallery.

Mary Rosenblatt Scholarships: Established primarily to assist students who are planning a career in teaching; however, they are not limited to students majoring in art education.

Betty Cabin Scholarships: To assist worthy students majoring in any program of the school.

Vince Dooley Scholarships: To assist worthy students majoring in any program of the school.

Art/Studio Art

Degree

Bachelor of Arts (A.B.)

Contact Person

William A. Marriott
Professor in Charge
bmarriot@arches.uga.edu
(706)542-1639

Department

Lamar Dodd School of Art
College of Arts and Sciences

Description of the Program

In the A.B. program in Studio Art, students are taught to use techniques and tools associated with studio media; to understand the non-verbal language of art and design in terms of artistic principles and application; to be able to organize visual elements both rationally and intuitively according to understood artistic principles; and to become familiar with the major achievements in the history of art. The program requires 24 hours in studio art beyond the 15 hours in Area F of the core curriculum. Thus, the major requires a total of 39 hours of studio courses. In addition to the Monuments of Art History, students must take 9 hours of art history at the 3000 or 4000 level. Required electives include a second literature course and a foreign language through the fourth semester. The A.B. in Studio Art is intended for students who want more academic courses and freedom to choose electives over a wider range of offerings than is afforded by the B.F.A. programs in Studio Art.

Career Opportunities

This degree program provides the student with a broad liberal arts education; it can, therefore, be used as the basis for further study in many fields, including art, or qualify a person for entry-level positions that require a liberal arts education.

Expectations of Transfer Students

Because the foundation courses (ARST 1050,

1060, 1070, and 1080), the introductory art history course, and a studio course at the 2000 level are required for the major and are taken in Area F of the Core Curriculum by students who matriculate at UGA, transfer students are urged also to take those courses or their equivalents to fulfill Area F.

For students who matriculate originally at UGA, successful completion of Portfolio Review is required. For transfer students, a minimum 2.5 GPA and successful completion of Portfolio Review are required.

Special Requirements

Students must earn at least a C in all major courses.

Program Requirements

Semester Core Curriculum Hours

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

ARHI 2100; ARST 1050, 1060, 1070, 1080; studio course at 2000 level

Major Requirements: 33

Two 2000-level Studio Art courses

Eighteen hours of Studio Art courses at 3000/4000 levels

Nine hours of Art History courses at 3000/4000 levels

Major Electives: 15

Fifteen hours of Humanities, Sciences, Social Sciences courses in the Franklin College, excluding Studio Art and Art History. Includes a second literature course and foreign language through the fourth semester.

General Electives: 12

(Refer to College-wide requirements when selecting general electives.)

Upper division (12 hours)

If major electives include upper division courses, any level of courses may be taken.

Total hours required 120

Fees

Some studio courses require additional fees.

Scholarships

The Kuzmicki-McCutchen Scholarships are awarded to high school seniors who plan to major in art at The University of Georgia. Submission of portfolios, letters of recommendation and transcripts occurs in December. Contact the School of Art for details.

The Albert Christ-Janer and Lamar Dodd Scholarships are awarded to high school seniors in conjunction with the annual School Art Symposium for study the following year.

The scholarships listed below are open to any full-time student majoring in any area of the visual arts who has completed a minimum of one year of study in the School of Art. Preference is generally given to students who will be juniors or seniors but, in the final analysis, all factors are taken into consideration before a decision is reached. Applications will be screened by an appointed faculty committee which will have sole discretion in determining recipients of the awards. Recipients of scholarships may be required to participate in a group exhibition in the Visual Arts Gallery.

Mary Rosenblatt Scholarships: Established primarily to assist students who are planning a career in teaching; however, they are not limited to students majoring in art education.

Betty Cabin Scholarships: To assist worthy students majoring in any program of the school.

Vince Dooley Scholarships: To assist worthy students majoring in any program of the school.

Banking and Finance

Degree

Bachelor of Business Administration (B.B.A.)

Contact

Jean Abbey

Administrative Coordinator

jabbey@cbacc.cba.uga.edu

(706) 542-4450

Department

Banking and Finance

Terry College of Business

Description of the Program

The study of finance develops an understanding of financial decisions made by corporations and how capital markets work. Students are provided with the skills and knowledge to value cash flows and assets, analyze the financial performance of firms, determine strategies to enhance the value of the firm, and understand financial innovations in domestic and international capital markets.

The program combines course work in financial management, investment analysis, financial institutions and markets, and international finance to prepare students for positions with major corporations, small business firms, brokerage firms, commercial banks, investment banks, insurance companies, other financial institutions, accounting and consulting firms, and government agencies.

Students are expected to complete course work in financial management, investment analysis, and international finance.

Career Opportunities

Management training positions in various non-financial firms as well as financial services firms

such as banks, brokerage firms, insurance companies, etc.; investment banking, retail brokerage; finance positions in small firms.

Entrance Requirements

Students accepted to Banking and Finance must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, 2102L, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours
42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: SPCM 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)

Area F:

ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090

Major Requirements:

FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; FINA 4000, 4200, 4310

Choose 3 or 4 courses from the following:
FINA 4210, 4280, 4320, 4380, 4420, 4600, 4810; AAEC(FINA) 4870; FINA 4920; REAL(FINA) 5100

If only 3 courses from above were chosen, you must choose one course from approved major-related list (available in the Banking and Finance Department) which

includes ACCT, RMIN, MARK, MGMT, REAL.

Major Electives:

Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000

General Electives:

(Refer to college-wide requirements when selecting general electives.)

(At least one course must be upper division)

Five courses in Arts and Sciences

One business course outside major

Two courses outside department

Total hours required

120

Internships

Finance students can earn three hours credit by completing an internship with a firm or with a government agency and preparing an in-depth research paper relating to banking or finance. Students are responsible for contacting the firm or agency and setting up the internship, which can be paying or non-paying, and must be at least a 30-hour work week. No other courses may be taken for credit at the same time.

Biochemistry and Molecular Biology

Degree

Bachelor of Science (B.S.)

Contact Person

Dr. Michael Adams
(706) 542-2060

Department

Biochemistry and Molecular Biology
College of Arts and Sciences

Description of the Program

The program provides students with a rigorous background in both the biological and physical sciences with an emphasis on the chemistry of life processes. Following introductory courses in biochemistry, genetics, cell biology, and molecular biology, students study advanced topics in biochemistry, including biotechnology, human disease, and physical biochemistry. Two semesters of laboratory research are required, typically as an independent research project in the laboratory of a faculty member, together with electives in microbiology, immunology, genetics, and/or developmental biology.

Career Opportunities

The program is designed for students who will spend their career in the biological sciences or in a closely related field. The program prepares stu-

dents for post-degree professional schools either in the life sciences (medicine, pharmacy, dentistry, optometry, etc.) or in scientific research typically via graduate school for careers either in industry or academia.

Expectations of Transfer Students

To prepare for course work in this major, the following courses are required: BIOL 1107-1107L and 1108-1108L; CHEM 1411, 1411L, 1412, 1412L (or CHEM 1211, 1211L, 1212, 1212L, and 2300, 2300L); CHEM 2211, 2211L and 2212, 2212L and PHYS 1211-1211L and 1212-1212L (or PHYS 1111-1111L and 1112-1112L). Substitution of any of the above courses will be individually considered based on the documentation provided by the student.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under general electives if not taken in Area D)	
<i>Preferred course in Area E:</i> ANTH 1102	18
Area F:	
BIOL 1108-1108L; CHEM 1212, 1212L, 2211, 2211L; PHYS 1111-1111L or 1211-1211L; two hours of electives	30
<u>Major Requirements:</u>	
BCMB 4020, 4120, 4130, 4960L, BCMB (CHEM) 4110; CBIO(BIOL) 3400; GENE(BIOL) 3204	
Choose one from the following: BCMB (BIOL)(CHEM) 3100; BCMB 4010	
Choose one from the following: BCMB 4030L, 4970L	
Choose one from the following: CBIO (BIOL) 3300; CBIO(MIBO) 4100; MIBO 3500	
<u>Major Electives:</u>	12
CHEM 2212, 2212L; MATH 2210, 2210L; PHYS 1112-1112L or 1212-1212L	
<u>General Electives:</u>	18
(Refer to College-wide requirements when selecting general electives.)	
Upper division (9 hours)	
Any level (9 hours)	
Total hours required	120

Minor in Biochemistry and Molecular Biology

Contact the department for requirements.

Biological Engineering

Degree

Bachelor of Science in Biological Engineering (B.S.B.E.)

Contact Person

E. Dale Threadgill, P.E.

Department Head

tgill@bae.uga.edu

(706)542-1653

Department

Biological and Agricultural Engineering

College of Agricultural and Environmental Sciences

Description of the Program

The Bachelor of Science in Biological Engineering (B.S.B.E.) degree program provides students with an excellent professional engineering education in complementary biological and engineering sciences so they may develop as experts, scholars, and entrepreneurs capable of implementing new ideas and technologies in the complex biologically-based industries.

The program meets highly promising and critically important needs for engineering systems in the rapidly advancing field of biotechnology. Recent discoveries in biological sciences are providing promising ways to beneficially manipulate biological systems ranging from individual cells to entire ecosystems for the purpose of increasing the quality, quantity, and cost effectiveness of food and other useful substances produced. Studies and surveys have identified needs and opportunities for engineering personnel in biomanufacturing, bioprocessing, and biocontrols. One report predicts that up to 2,500 additional biological engineers will be needed each year for the next ten years. Graduates of this program will meet the critical needs of the developing biologically-based industrial and manufacturing sector in the United States.

The four-year professional engineering program provides the student with a balance of basic sciences, humanities, social sciences, engineering sciences, biological sciences, and courses in engineering design and analysis. All students complete biological science courses in biology, organic chemistry, microbiology, and biochemistry with an option to select additional courses in genetics, cell biology, zoology, or botany. Engineering science courses required are statics, fluid mechanics, strength of materials, electrical circuits, heat transfer, and thermodynamics. Students also select from engineering courses in mass transport and rate phenomena, biomaterials, engineering and design of biological processes, biomechanics, environmental engineering, instrumentation for environmental quality and bioprocess monitoring and control.

Three areas of engineering emphasis are provided: 1) Environmental, 2) Bioprocessing, and 3) Biomedical. These emphasis areas allow the student to tailor course work toward an area of their primary interest. The development of both technical and communication skills is stressed throughout the program. Students are encouraged to participate in professional activities through local and national organizations.

The curriculum in biological engineering is accredited by the Accrediting Board for Engineering and Technology (ABET) and graduating seniors must complete the fundamentals of Engineering examination prior to graduation. Successful completion of this exam qualifies the student for Engineer in Training registration which is a prerequisite for the Professional Engineer registration.

Career Opportunities

Employment demand for engineers remains among the most favorable of all the professions. A particularly rapid increase in demand has occurred in the food and agricultural products industries due to the recent development of processes and tools in biotechnology. Biological engineers will be essential to the solution of many process-development needs if the results from the efforts of life scientists are to be successfully transferred to full-scale production. Solving problems in biocatalysis, heat and mass transfer, efficient energy conversion and product recovery in biological processes requires an integration of the engineering and biological science disciplines.

The estimated number of job openings for biological engineers is about 2,500 per year for the next ten years. These positions include protein engineering, industrial fermentation, cell culture process engineering, filtration engineering, pilot plant scale-up, and others. A B.S. in Biological Engineering will meet the educational qualifications for each of these positions. Graduates will also be highly qualified for employment in more traditional engineering positions such as in pharmaceutical, environmental, or chemical industries.

Expectations of Transfer Students

Students transferring into this program must have an overall grade point average of 2.5 or higher.

Special Requirements

Students must earn a C or better in required math and physics courses and ENGR 1120, 2110, 2120, 2140, 2150, and 2170. Competency in a procedural computer language, such as C++, is expected.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Hours

42

Required courses in Area A: ENGL 1101, 1102, and MATH 2200, 2200L

Preferred courses in Area C: SPCM 1100 and one course from CMLT 2210, 2220, 2400; ENGL 2310, 2320, 2330, 2340, or 2400 (take under general electives if not taken in Area C)

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2210, 2210L (take under general electives if not taken in Area D)

Area F:

CHEM 1212, 1212L; MATH 2500, 2700; PHYS 1211-1211L, 1212-1212L

Major Requirements:

BCMB(BIOL)(CHEM) 3100; BIOL 1108-1108L; CHEM 2211, 2211L; ENGR 1120, 1920, 2110, 2120, 2140, 2150, 2170, 2500, 2920, 3140, 3150, 3520, 4920; MIBO 3500, 3510L

Major Electives:

Select one course from CBIO 3700; CBIO(BIOL) 3400; CBIO(MIBO) 4100; CRSS 4600-4600L; ECOL (BIOL) 3500-3500L; MIBO 4090; VPHY 3100

Select one of the following Areas of Emphasis:

Environmental Area of Emphasis
ENGR 3410, 3440, 4440, 4450, 4480

Bioprocessing Area of Emphasis
ENGR 4510, 4530, 9 hours from ENGR 3540, 4520, 4940; FDST 4060-4060L

Biomedical Area of Emphasis
ENGR 4740; 12 hours from ENGR 2130, 3300, 4230, 4510, 4530, 4620, 4760, 4940

General Electives:

Upper division (0-1 hours)

Total hours required

Scholarships

The following scholarships are available for B.S.B.E. majors in the Biological and Agricultural Engineering Department: Bruce E. Dixon Scholarship; Georgia Section ASAE Scholarship; Rudie Driftmier Scholarship; Goodloe Yancey Scholarships; B. Derrell McLendon Scholarship; Robert H. Brown Scholarship.

Cooperative Education

The Biological and Agricultural Engineering Department offers its students an opportunity to integrate academic instruction and real-life applications through a cooperative plan of education. Usually beginning after the freshman year, the plan allows for alternating semesters of full-time, off-campus professional work experience in des-

igned industries, agencies and laboratories arranged by the Department. The student is considered by the University to be in an uninterrupted program of study since the student is enrolled for academic credit while on work-experience semesters. While co-op placement does not imply permanent employment of the student upon graduation, it does provide an extended period for mutual evaluation by the student and the cooperating industry enhancing the possibility of permanent employment.

Biological Science

Degree	
Bachelor of Science in Agriculture (B.S.A.)	
Contact Person	
Birkett Howarth	
Professor	
bhowarth@uga.cc.uga.edu	
(706)542-1369	
Department	
Poultry Science	
College of Agricultural and Environmental Sciences	

Description of the Program
This major provides a very flexible program of study integrating both biological and agricultural sciences.

Career Opportunities
This major provides preparation for graduate or professional study as well as for employment in business, industry, or government positions requiring a broad background in the biological sciences. Opportunities for work in biology and agriculture are expected to grow as an increasing human population demands more food, fiber, and wood products, health care, and environmental stewardship.

Expectations of Transfer Students
Students must have taken courses in general biology, general chemistry, organic chemistry, precalculus math, and physics (check with advisor of this program for specific course sequence requirement).

Program Requirements	
<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area C:</i> SPCM 1100 or 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L; CHEM 1211, 1211L; and MATH	

2200, 2200L (take under general electives if not taken in Area D)	
Area F:	18
BIOL 1108-1108L; CHEM 1212, 1212L, 2211, 2211L, 2212, 2212L; PHYS 1111-1111L	
<u>Major Requirements:</u>	23-26
BCMB(BIOL)(CHEM) 3100; GENE (BIOL) 3204 or PGEN 3580-3580L; MIBO 3500, 3510L	
Select 6 to 7 hours from BIOL 3700; CBIO(BIOL) 3300, 3400, 3800; ECOL (BIOL) 3500-3500L; GENE(BIOL) 4604	
Select 6 to 8 hours from ADSC 3300-3300L, 3310-3310L, 3400-3400L; CBIO 3000-3000L, 3700, 4730; CBIO(BIOL) 3410L; CBIO (MIBO) 4100; ECOL (FORS) 3260-3260L; ECOL(BIOL) 3510; ENTO 3740-3740L; MARS 3450-3450L; PATH 3530-3530L; POUL 3750, 3800-3800L, 4030; VPHY 3100	

<u>Major Electives:</u>	19
PHYS 1112-1112L	
Fifteen hours of upper division courses in the College of Agricultural and Environmental Sciences	
<u>General Electives:</u>	15-18
Upper division (0-1 hour)	
Any level (0-18 hours)	
<i>Total hours required</i>	120

Scholarships
Several scholarships are available to students in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships
Internships are available but not required.

Biology

Degree	
Bachelor of Science (B.S.)	
Contact Person	
Dr. William Barstow	
Associate Decision Chairman and Director of Undergraduate Degree Programs in Biology	
barstow@dogwood.botany.uga.edu	
(706)542-1691	
Department	
Biology	
College of Arts and Sciences	

Description of the Program
The Bachelor of Science (B.S.) degree with a major in biology is a liberal arts degree with a

concentration in the biological sciences. It is not a pre-professional degree, but it does prepare students for professional programs in veterinary medicine, dentistry, medicine, pharmacy, etc., as well as for advanced degrees in the biological sciences, i.e., Master of Science (M.S.) and Doctor of Philosophy (Ph.D).

A major in biology is valuable because of the important role that biology plays in our everyday lives. An understanding of basic biological principles is crucial in interpreting the implications of environmental degradation and loss of biodiversity, the impact of genetic engineering and biotechnology in crop improvement, the treatment of disease, forensic medicine, and legal and ethical issues associated with the above.

Career Opportunities

A major in biology offers an excellent background for a variety of careers and advanced training. Many biology majors go into medicine, law, dentistry, veterinary medicine, pharmacy, optometry, and academia. Numerous career opportunities can be found in government, business, pharmaceuticals, biotechnology, environmental survey/control and other industries. In addition, opportunities are available in other disciplines such as journalism, broadcasting, and public policy. A more complete treatment of careers open to those with a biology degree is provided in the *Handbook For Biology Majors*.

Expectations of Transfer Students

Students who are transferring upon completion of two years of course work are strongly encouraged to complete Areas D and F as specified for the biology major. Students should contact the College of Arts and Sciences or the Biology Program Office for information on how best to fulfill these requirements. Students are strongly encouraged to take a majors' introductory biology sequence if it is available. At least 15 hours of the advanced biology courses required for the major must be taken in residence at UGA.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours
42

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ANTH 1102 or GEOG 1101-1101D, HIST 2111 or 2112, POLS 1101-1101D

Area F:

BIOL 1108-1108L; CHEM 1212, 1212L, 2211, 2211L; PHYS 1111-1111L, 1112-1112L

Major Requirements:

BCMB(BIOL)(CHEM) 3100; GENE (BIOL) 3204

Choose three from the following: CBIO (BIOL) 3300, 3400; ECOL (BIOL) 3500-3500L; GENE (BIOL) 4604

Organismal:

Choose one course from BTNY 4650-4650L; CBIO 3000-3000L, 4500-4500L; CBIO(BTNY) 4600-4600L; ECOL (FORS) 3260-3260L; ECOL 4000-4000L, 4070-4070L; ENTO 3140-3140L, 4000-4000L; MARS 3450-3450L; MIBO 3500; PATH(BTNY) 4200-4200L

Laboratory

Option I:

Choose one course from BCMB 4030L; BIOL 3110L, 3710L, 4960, 4960H; BIOL(CBIO) 5050L; CBIO(BIOL) 3410L; ECOL(BIOL) 3510; GENE 3214, 4214L; MIBO 4600L

Option II:

Choose two courses (one of which will count as a biology elective) from BIOL (CBIO) 5050L; BTNY 4230-4230L, 4650-4650L; CBIO 3000-3000L, 4500-4500L; CBIO (BTNY) 4600-4600L; ECOL (FORS) 3260-3260L; ECOL 4000-4000L, 4020-4020L, 4030-4030L, 4040-4040L, 4050-4050L, 4060-4060L, 4070-4070L; ECOL (FORS) 4310-4310L; ENTO 3140-3140L, 3650-3650L, 3740-3740L, 4000-4000L, 4010-4010L, 4400-4400L; MARS 3450-3450L, 4500; MARS (MIBO) 4620-4620L; MIBO 3500, 4700-4700L; PATH (BTNY) 4200-4200L

Major Electives:

Choose 7-9 hours from 3000-level or above courses from BIOL, BCMB, BTNY, CBIO, ECOL, ENTO, GENE, MIBO; MARS 3450-3450L, 4110, 4500, 4810; MARS (FORS) 4380-4380L, MARS (MIBO) 4620-4620L; PSYC 4120, 4130, 5750, 5760, 5770, 5850

One course from Philosophy or Religion or a second Fine Art (any level)

Foreign Language (Second and Third Semesters)

Choose one course from CHEM 2212, 2212L; MATH 2210, 2210L or STAT 2210

General Electives: 13-18
 (Refer to College-wide requirements when selecting general electives.)
 Upper division (6-11 hours)
 Any level (2-12 hours)

Total hours required 120

Minor in Biology
 Contact the department for requirements.

Botany

Degree
 Bachelor of Science (B.S.)
Contact Person
 David Porter
 Professor
 porter@dogwood.botany.uga.edu
 (706)542-1782
Department
 Botany
 College of Arts and Sciences

Description of the Program

The undergraduate core curriculum in Botany is aimed at giving students a broad understanding of plant biology but with experience in chemistry, physics and mathematics. In addition to courses in botany, the undergraduate major will take core biology courses including biochemistry, genetics and ecology. Advanced courses are typically restricted in their enrollment for more interactive learning and typically include laboratory experience as well as lectures. Independent research is an important option available to advanced undergraduates. Directed study in the field or laboratory with a faculty member on a specific research topic gives the student first-hand experience with the actual process of botanical investigation.

Career Opportunities

Careers in Plant Sciences are numerous and diverse. They include research at universities, government laboratories and at biotechnology companies; teaching at the high school, college or university level; management and interpretation as staff biologist with state and federal agencies; and administration and sales with plant and plant product related industries. An undergraduate major in botany also provides a strong background for graduate-level study in botany and other biological sciences.

Expectations of Transfer Students

Recommended courses: 1) Botany or general Biology sequence; course content should be very similar to sequences taught at UGA since the

introductory course content is prerequisite to the upper division biological sciences courses taught at UGA. Sequences should be completed at one institution; 2) General Chemistry; 3) Calculus.

The courses in biology and chemistry are prerequisite to upper division biology courses. Students who transfer to UGA without these courses will be delayed in completing the requirements for the major.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Preferred courses in Area D: CHEM 1211, 1211L, 1212, 1212L; MATH 2200, 2200L (take under general electives if not taken in Area D.)

Area F:	18
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Choose one sequence from BIOL 1107-1107L, 1108-1108L or BTNY 1210-1210L, 1220-1220L; PHYS 1111-1111L, 1112-1112L

2-3 additional hours with approval of advisor

<u>Major Requirements:</u>	31-32
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BCMB(BIOL)(CHEM) 3100; BTNY 3830-3830L, 4230-4230L, 4650-4650L; CBIO(BIOL) 3400; ECOL(BIOL) 3500-3500L; GENE(BIOL) 3204, 4604; PATH(BTNY) 4200-4200L or CBIO (BTNY) 4600-4600L

<u>Major Electives:</u>	24
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CHEM 2211, 2211L
 3rd semester of a foreign language
 2nd semester of literature
 Choose 14 hours from the following:
 CHEM 2212, 2212L; STAT 4210, 4220;
 MATH 2210, 2210L

4th semester of foreign language

<u>General Electives:</u>	4-5
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(Refer to College-wide requirements when selecting general electives.)

Upper division (0-2 hours)
 Any level (2-5 hours)

<i>Total hours required</i>	120
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Minor in Botany

Contact the department for requirements.

Business Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Wanda Stitt-Gohdes
Undergraduate Coordinator
wls@uga.cc.uga.edu
(706)542-4078

Department

Occupational Studies
College of Education

Description of the Program

A major in business education prepares educators for grades 7-12 in Georgia. The curriculum provides the opportunity for students to take courses in accounting, economics, and legal studies in the Terry College of Business. A series of business education and professional education courses are taken in the College of Education.

Career Opportunities

Students are prepared as teachers for grades 7-12 and post-secondary technical institutes. This educational experience also provides an excellent background for those who may choose to move into the corporate training and development arena.

Expectations of Transfer Students

Recommended courses for transfer students include accounting, business law, precalculus, economics, and psychology. Courses and/or competence in keyboarding is also required for upper level courses.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

ACCT 2101 (minimum grade of C), 2102 (minimum grade of C); EFND 2030; EPSY 2020; LEGL 2700 (minimum grade of C); three hours of an elective

Major Requirements: 50-54

EBUS 4010, 4020, 5030, 5070, 5090, 5100, 5460, EBUS 5760 or HACE 3200; EOCS 2450, 3450, 4350, 4360, 3010, 5030, 5550

Major Electives: 6

Choose two courses from the following:
EBUS 5060; ETES 5010; HACE 3000, 3100; MARK 3000; MGMT 3000; MSIT 3000; REAL 4000; RMIN 4000

General Electives:

Any level

Total hours required

0-6

120

Special Requirements

A 2.5 GPA is required for admission to teacher education.

Internships

Supervised observations and participation in cooperating schools is required for all students. Full-time student teaching is required for certification.

Cellular Biology

Degree

Bachelor of Science (B.S.)

Contact Person

David T. Lindsay
Associate Professor
lindsay@cb.uga.edu
(706)542-3310

Department

Cellular Biology
College of Arts and Sciences

Career Opportunities

Employment opportunities exist in medical and allied health sciences, and in academic research and teaching.

Entrance Requirements and Expectations of Transfer Students

Requirements for entry to the major include Introductory Biology BIOL 1107-1107L, 1108-1108L for science majors, Introductory Chemistry CHEM 1211, 1212, Modern Organic Chemistry I and II CHEM 2211, 2211L, CHEM 2212, 2212L, Introductory Physics PHYS 1111-1111L, 1112-1112L.

Special Requirements

Students must maintain a minimum GPA of 2.0 and a minimum grade of C in all major courses.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L and MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

BIOL 1108-1108L; CHEM 1212, 1212L; PHYS 1111-1111L, 1112-1112L; two hours of electives at the 1000-2000 level

Major Requirements:	22-32
BCMB (BIOL)(CHEM) 3100; CBIO (BIOL) 3300, 3400; CBIO 4990; GENE (BIOL) 3204	
Choose one course from BIOL 3110L; CBIO(BIOL) 3410L; or choose two courses from CBIO 4960H, 4970H, 4980, 4980H	
Choose three courses from BIOL (CBIO) (VPAT) 5040; BIOL (CBIO) 5050; CBIO 3000-3000L, 3700, 4340, 4500-4500L, 4600-4600L, 4730, 4960H, 4970, 4970H, 4980, 4980H, 4990H, CBIO (BIOL) 3800; CBIO (MIBO) 4100	
Major Electives:	8
CHEM 2211, 2211L, 2212, 2212L	
General Electives:	20-30
(Refer to College-wide requirements when selecting general electives.)	
Upper division (7-17 hours)	
Any level (3-23 hours)	
Total hours required	120
Minor in Cellular Biology	
Contact the department for requirements.	

Chemistry

Degree	
Bachelor of Science (B.S.)	
Contact Person	
Dr. Robert A. Scott	
Department Head	
706)542-2726	
Department	
Chemistry	
College of Arts and Sciences	

Description of the Program

This program is designed for the student who intends to major in chemistry but may wish to pursue a career in some other science-related field, including the health sciences, business, and the legal profession. It is often chosen by students who intend to pursue postgraduate studies in medicine, dentistry, or veterinary medicine. The curriculum for this degree consists of a selection of chemistry courses and supporting courses in other areas of physical and biological sciences as well as mathematics. This program is intended to provide the student with a broad background in chemistry and related disciplines.

Career Opportunities

Students who successfully complete this curriculum will possess a broad background in chemistry and related sciences with sufficient depth of knowledge to pursue a wide variety of career options,

ranging from employment as chemists in government or industrial laboratories to enrollment in a wide variety of post graduate degree programs, including those offered by professional schools of medicine, dentistry, and law.

Expectations of Transfer Students

To transfer into chemistry without delay, students must already have credit in two semesters of freshman chemistry, two semesters of organic chemistry, one semester of quantitative analysis, one semester of calculus, and two semesters of non-calculus based physics.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> MATH 2200, 2200L; choose two of the following lab science courses: CHEM 1211, 1211L; BIOL 1107-1107L or 1108-1108L (take under general electives if not taken in Area D)	
Area F:	18
CHEM 1212, 1212L; PHYS 1111-1111L, 1112-1112L	
Choose two courses from CHEM 2211, 2211L; 2212, 2212L; 2300, 2300L	
Major Requirements:	24
BCMB(BIOL)(CHEM) 3100; CHEM 3300, 3400, 3511L, 4500	
Three other 3-hour upper division chemistry courses	
Major Electives:	4
Choose one course from the following (not taken in Area F): CHEM 2211, 2211L; 2212, 2212L; 2300, 2300L	
General Electives:	32
(Refer to College-wide requirements when selecting general electives.)	
Upper Division (15 hours)	
Any level (9 hours)	
Total hours required	120
Minor in Chemistry	
Contact the department for requirements.	

Chemistry (B.S.Chem)

Degree

Bachelor of Science in Chemistry (B.S.Chem)

Contact Person

Dr. Robert A. Scott
Department Head
(706)542-2726

Department

Chemistry
College of Arts and Sciences

Description of the Program

This program is designed for the student who intends to become a professional chemist. The curriculum for this degree consists of a selection of rigorous chemistry courses as well as supporting courses in related areas of physical science and mathematics. This curriculum meets the standards set for certification by the American Chemical Society.

Career Opportunities

All students who satisfactorily complete this curriculum are certified by the Department of Chemistry to the American Chemical Society as having completed the undergraduate training recommended by the A.C.S. The curriculum for this degree offers training in the field of chemistry and its allied sciences for students who desire to enter commercial or government laboratories or the teaching profession, to become associated with chemical industries in a non-technical position, or to pursue graduate work in chemistry in order to enter some field of research or college teaching.

Expectations of Transfer Students

To transfer into chemistry without delay, students must already have credit in two semesters of freshman chemistry, two semesters of organic chemistry, one semester of quantitative analysis, two semesters of calculus, and two semesters of calculus-based physics. No transfer students will be accepted as candidates for this degree later than the beginning of their junior year. Students wishing to obtain this degree should enter the University no later than the beginning of their sophomore year. For further information, contact the head of the Department of Chemistry.

Special Requirements

An average GPA of 2.5 or higher is required in chemistry and in other academic subjects in both lower and upper division programs.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Hours

42

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 1211, 1211L; MATH 2200, 2200L; and choose one course from BIOL 1107-1107L or 1108-1108L (take under general electives if not taken in Area D)

Area F:

CHEM 1212, 1212L; MATH 2210, 2210L; PHYS 1211-1211L, 1212-1212L

Choose one course from CHEM 2211, 2211L; 2212, 2212L; 2300, 2300L

Major Requirements:

CHEM 3211, 3212, 3300, 3400, 3511L, 3512L, 3600 or 4600, 4500

Choose one course from CHEM 4100, 4200, 4300, 4400

Major Electives:

Choose two courses from CHEM 2211, 2211L; 2212, 2212L; 2300, 2300L

General Electives:

(Refer to College-wide requirements when selecting general electives.)

Upper division (11 hours)

Any level (13 hours)

Total hours required

18

28

8

24

120

Child and Family Development

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Diane Hodson
Undergraduate Advisor
hodson@fcs.uga.edu
(706)542-4896

Department

Child and Family Development
College of Family and Consumer Sciences

Description of the Program

This program is designed for students who want a broad background in the area of children and families across the life span. In addition to major courses, students enrolled in this program are required to take an approved secondary area or minor. All approved minors are acceptable. Students pursuing this program may enroll in an internship program providing they meet certain criteria. Those who wish to attend graduate school are encouraged to take courses in research methods, statistics, and computer sciences.

Career Opportunities

This major prepares professionals for jobs requiring a general understanding of the behavior of individuals and families across the life span.

Entrance Requirements

A student must be in good standing at UGA with a 2.0 minimum GPA to enter the program.

Expectations of Transfer Students

Students transferring into this major should have fulfilled the core curriculum requirements. Those students who have an interest in Child and Family Development should check with the Department of Child and Family Development to determine the actual requirements for entry into these programs. Lacking the basic preparatory courses will add to the time needed to complete the degree in all programs.

Program Requirements

Semester Core Curriculum Hours

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1100 or PHIL 2500

Preferred courses in Area D: BIOL 1103-1103L, 1104-1104L, and MATH 1060 or STAT 2000

Preferred courses in Area E: PSYC 1101 and SOCI 1101 or ANTH 1102

Area F: 18

CHFD 2100, 2950-2950L; CSCI 1100-1100L; FDNS 2100; HACE 2100; three hours of foreign language, speech, or social science

Major Requirements: 43

CHFD 2000, 3110 (3 hours), 3700, 3710, 3920; FDNS 4510; HACE 3100, 3200; TXMI 3550; choose 9 hours from CHFD 3900, 3930, 4120, 4130, 4330, 4620, 4700, 4810, 4860, 4870, 5100, 5110, 5120, 5130, 5140, 5160L; CHFD(HACE) 4500; CHFD(SOCI) 4610; choose 9 hours with the agreement of the advisor which represents a cohesive focus in an area related to Child and Family Development

General Electives: 17

Consult Department

Upper division (6 hours)

Any level (11 hours)

Total hours required 120

Minor in Child and Family Development

Contact the department for requirements.

Child and Family Development—Early Childhood Education: Prekindergarten - Grade 2

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Julia Atiles

PreK Coordinator

jatiles@fcs.uga.edu

(706) 542-4164 (CFD) or (706) 542-4853 (Ed.).

Department

Child and Family Development

College of Family and Consumer Sciences

Description of the Program

Graduates with this major (a joint program with the College of Education) are qualified for certification to teach children in preschool through fifth (P-5 certification) grade settings in public and private schools.

Career Opportunities

This program prepares certified teachers for prekindergarten through grade five.

Entrance Requirements

A minimum cumulative GPA of 2.75 is required before admission to the sequence of courses designated as Level I in the College of Education.

Expectations of Transfer Students

Students transferring into this major should have fulfilled the core curriculum requirements. Those students who have an interest in Early Childhood Education should check with the Department of Child and Family Development to determine the actual requirements for entry into this program. Lacking the basic preparatory courses will add to the time needed to complete the degree.

Special Requirements

Students must meet state teacher certification requirements.

Program Requirements

Semester Core Curriculum Hours

Area A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area E: PSYC 1101

Area F: 18

CHFD 2950-2950L*; EFND 2030*; HPRB 2420 or CHFD 2100*; PEDS 2420 or SPED 2000*; three hours in a foreign

language*; three hours in a foreign language (second course in same language)* or MATH course*

*Requirement for certification, for entry into professional sequence (blocks), or prerequisite for other coursework. If not included in Area F, must be included elsewhere in program of study.

Major Requirements:

Block I: (Field Experience: One full day per week in Pre-Kindergarten)

CHFD 2000, 4860, 5130; EMAT 3400; SPED(EDEC) 5100; two hours of electives

Block II: (Field Experience: Two days (five hours each day) per week in Grades 1-3 or 4-5)

EDEC(CHFD) 4020; ELAN 3110; EMAT 3410; ESOC 3420; READ 4020

Block III: (Field Experience: Two full days per week for fourteen weeks plus one full week in Grades 1-3 or 4-5)

CHFD(EDEC) 5150; EDEC(CHFD) 4030; ELAN 4120; ESCI 4420; three hours of READ elective

Block IV: (Field Experience: Four and one-half days per week in Pre-Kindergarten - Grade 2; one-half day per week on campus) EDEC(CHFD) 5460 (15 hours)

(Alternative: Eliminate the elective in Block I and add a one-hour EDEC(CHFD) laboratory/field-experience course to each of the first three blocks.)

Total hours required

60

120

Classical Culture

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Sarah Spence
Undergraduate Coordinator
spence@uga.cc.uga.edu
(706) 542-0417

Department

Classics
College of Arts and Sciences

Description of the Program

This program provides students with an opportunity to pursue studies in Greek and Roman literature, history, archaeology, art, philosophy, and religion, without concentrating on the ancient languages, although some study in Latin and/or Greek is strongly encouraged.

Archaeology Concentration

The Classics Department offers a concentration in archaeology under the classical culture major. Students may contact the department for details. This program provides students with an opportunity to study the archaeology, languages, art and history of the Greeks and Romans; the program also offers students archaeological field experience on a classical site.

Career Opportunities

Career opportunities for graduates include teaching at the secondary level, non-teaching academic positions, museum work, library work, editorial work, positions in the travel and tourist industry, and government positions in foreign service. The major also prepares students to enter graduate school in classics, comparative literature, linguistics, history, and other fields (for university teaching positions). Other opportunities include careers in law, journalism, and business.

Expectations of Transfer Students

Transfer students should have completed courses in world literature, as well as ancient history or classical culture, and preferably some work in Latin and/or Greek.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: CLAS 1000 or 1010 (take under general electives if not taken in Area C)

Area F:

Six hours of foreign language 1001-1002 (preferably GREK or LATN; GREK or LATN required for the Archaeology Concentration); CLAS 1020 or CLAS (ANTH) 2000 [CLAS (ANTH) 2000 required for the Archaeology Concentration]

Choose three courses from CLAS (LING) 2010; CMLT 2210; HIST 2301; PHIL 1500

Major Requirements:

Two foreign language courses 2001-2002 (preferably GREK or LATN)

Six 3000/4000-level CLAS courses (For the Archaeology Concentration, the language must be GREK or LATN and the specific CLAS courses must be approved by the department and may include certain courses in ANTH and GEOL.)

Hours
42

18

24

Major Electives:

Three courses 3000-level or above, in any combination, in CLAS, GREK, or LATN, or courses in ANTH, ARHI, CMLT, HIST, LING, PHIL that have a significant component dealing with the ancient Greco-Roman world and are approved by the Classics Department, or up to 6 hours of 1000- or 2000-level Greek or Latin (when NOT used to satisfy the major's or the College's foreign language requirement). For the Archaeology Concentration, one of these three courses must be 3000/4000-level GREK or LATN, and the other two courses must be specifically approved by the department.

General Electives:

(Refer to College-wide requirements when selecting general electives.)

Upper division (12-18 hours)

Any level (9-15 hours)

Total hours required 120

Scholarship

The Warlick-Mannion Scholarship (up to \$1,000 per year) is available to students in this major.

Minor in Classical Culture

Contact the department for requirements.

Clothing and Textiles

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Theresa Perenich

Professor

tperenic@fcs.uga.edu,
(706)542-4887

Department

Textiles, Merchandising and Interiors
College of Family and Consumer Sciences

AREA OF EMPHASIS: TEXTILE AND APPAREL MANAGEMENT

Description of the Program

Courses in textiles and apparel offered in the department are combined in a program of study with courses in the Terry College of Business and the College of Journalism and Mass Communication to provide the student with a dynamic undergraduate program. The program provides students with problem-solving tools needed in today's management environment. A focus of the program is international aspects of textiles and apparel.

9

Career Opportunities

National and international firms and businesses dealing with production, distribution, quality control, and purchasing of textile and apparel products, materials and auxiliaries employ students with management competencies. Segments of the textile and apparel industry employ graduates with training in advertising, public relations, sales, human resource management and international business. Internships are available for qualified students. Salaries for graduates average \$30,000.

Expectations of Transfer Students

Students transferring into the Clothing and Textiles major with a specialization in Textile and Apparel Management should have fulfilled the core curriculum requirements, including elementary chemistry, economics, psychology, sociology, mathematics, accounting, introduction to computer science, social sciences, English, literature, and speech.

Program Requirements

Semester Core Curriculum	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Preferred course in Area C: SPCM 1100	
Preferred courses in Area D: CHEM 1110, 1110L and MATH 1113	
Preferred courses in Area E: ECON 2105 or 2106 and PSYC 1101	
Area F:	18
ACCT 2101, 2102; CHFD 2100 or HACE 2100; CSCI 1100-1100L or (MGMT 2090, 2090L); LEGL 2700; MATH 2200, 2200L	
Major Requirements:	46
ADPR 3100, 3850; MGMT 3000, 4000, 4250; STAT 4210; TXMI 2000, 3550, 3570, 3500, 3500L, 3520, 3530, 4120, 4520; TXMI 4110 or 4150 or 4140; TXMI 4530 or 4540 or 4550	

General Electives:

Any level 14

Total hours required 120

AREA OF EMPHASIS: TEXTILE SCIENCE

Description of the Program

Textile Sciences in the Department of Textiles, Merchandising, and Interiors in the College of Family and Consumer Sciences offers programs for students interested in practical applications of science in textile processing, dyeing and finishing, polymers and fibers, testing and analysis and environmental processes. Laboratory work is an important dimension of this program and students

gain “hands on” experiences in dyeing, finishing, textile testing, fiber and fabric analysis, and microscopy labs.

Career Opportunities

Exciting and well-paying careers are available in research, development, quality analysis, and product testing in textile, chemical and auxiliary industries, and government and private laboratories. Internship programs are available for qualified, interested students.

Expectations of Transfer Students

A student transferring into the Textile Science program in the Clothing and Textiles major should have a strong interest in chemistry and mathematics. Students will be required to have taken or to take core curriculum courses in mathematics (MATH 2200, 2200L, 2210, 2210L), psychology, economics, speech communication, elementary chemistry (CHEM 1211, 1211L, 1212, 1212L) and social science.

Program Requirements

Semester Core Curriculum

Areas A-E:	42
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See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100

Preferred courses in Area D: CHEM 1211, 1211L, 1212, 1212L, and MATH 2200, 2200L

Preferred courses in Area E: ECON 2105 or 2106 and PSYC 1101

Area F:	18
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CHEM 2211, 2211L, 2212, 2212L; CHFD 2100 or HACE 2100; CSCI 1100-1100L or MGMT 2090, 2090L; MATH 2210, 2210L

<u>Major Requirements:</u>	46
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CHEM 3211 or MATH 2700; CHEM 2300, 2300L; PHYS 1111-1111L or 1211-1211L; STAT 2210; TXMI 2000, 3500, 3500L, 3520, 3550, 3570, 4100, 4110, 4140; and three of the following: TXMI 4120, 4130, 4150, 4520

<u>General Electives:</u>	14
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Upper division (8 hours)

Any level (6 hours)

<i>Total hours required</i>	120
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Minor in Textile Science

Contact the department for requirements

Cognitive Science

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Paula J. Schwanenflugel
Professor of Educational Psychology and Coordinator of the Cognitive Science Program
pschwane@coe.uga.edu
(706) 542-4273

Department

Artificial Intelligence Program
College of Arts and Sciences

Description of the Program

Cognitive science is an emerging new science of mind and intelligent processes in humans, animals, computers, and in the abstract. The field spans a wide variety of standard disciplines including psychology, computer science, anthropology, linguistics, biology, and education. Cognitive science is expected to play a large role in the development of the technologies, training, and intervention programs of the twenty-first century. The curriculum of this interdisciplinary major includes courses in major areas including artificial intelligence, psychological foundations, language and cultural foundations, and philosophical foundations.

Career Opportunities

A cognitive science major is preferable preparation for students who plan to go on to graduate programs in cognitive science, educational technology, artificial intelligence, instructional psychology, cognitive psychology, cognitive philosophy, or cognitive neuroscience. Cognitive science A.B. holders typically find themselves employed in technology-related positions demanding excellent technical, writing, and speaking skills.

Entrance Requirements

Students must have a GPA of 2.5 or more after two semesters.

Expectations of Transfer Students

Transfer students should have a completed core curriculum and have a GPA of 2.5.

Special Requirements

A GPA of 2.5 or better is required; 18 hours of the 24 required hours must be taken in residence.

Program Requirements

Semester Core Curriculum

Areas A-E:	42
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See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

<i>Preferred course in Area C:</i>	LING 2100	
<i>Preferred courses in Area D:</i>	CSCI 1210 and BIOL 1103-1103L	
<i>Preferred course in Area E:</i>	ANTH 1102	
Area F:		18
CSCI 1301-1301L; LING 2100 (if not taken in Area C); MATH 1113; PSYC 1101; STAT 2000		
<i>Major Requirements:</i>		25-29
CSCI (PHIL) 4550; EPSY (PSYC) (ARTI) 3020; PHIL (LING) 4300 or PHIL 4310; PSYC 4100		
Choose two courses in two of the following four areas (not included in above):		
<i>Artificial Intelligence Foundations Area</i>	CSCI 2120, 2670, CSCI (ARTI) 4540	
<i>Philosophical Foundations Area</i>	PHIL 3610, 4310; PHIL (LING) 4300, 4510, 4520	
<i>Psychological Foundations Area</i>	PSYC 4110, 4120, 4650, 4930	
<i>Language and Cultural Foundations Area</i>	ANTH (LING) 3080, 4090; CMSD (LING) 4500; LING (ENGL) 3150	
<i>Major Electives:</i>		6
Foreign language through the second semester including: ARAB, CHNS, FREN, GRMN, GREK, HEBR, ITAL, JPNS, KREN, LATN, PORT, RUSS, SPAN, and SWAH		
<i>General Electives:</i>		25-29
(Refer to College-wide requirements when selecting general electives.)		
Upper division (10-14 hours)		
Any level (11-19 hours)		
<i>Total hours required</i>		120

Communication Sciences and Disorders

Degree	
Bachelor of Science in Education (B.S.Ed.)	
Contact Person	
Jane Harvey	
Academic Professional and Undergraduate Student Advisor	
Jharvey@uga.cc.uga.edu	
(706)542-4561	
Department	
Communication Sciences and Disorders	
College of Education	

Description of the Program
 The CMSD department in the School of Professional Studies offers an undergraduate program

leading to a Bachelor of Science in Education degree (B.S.Ed.). Students desiring to practice in the areas of speech-language pathology, audiology, or education of the hearing impaired and to obtain full professional credentials and certification from the Georgia Professional Standards Commission, students must obtain a Master's degree from an accredited program. Students must apply to the Graduate School for acceptance into a master's program.

Career Opportunities

The master's degree is the entry-level degree for the practice of Speech-Language Pathology and Audiology in hospitals, rehabilitation settings, public schools, etc. The University of Georgia Department of Communication Sciences and Disorders and the College of Education do not endorse individuals for public school certification upon completion of the bachelor's degree in CMSD. Completion of a bachelor's degree does not guarantee acceptance into a master's degree program. These conditions apply to all individuals intending to specialize in any of the three emphasis areas offered at the graduate level: audiology, education of the hearing impaired, and speech-language pathology.

Entrance Requirements and Expectations of Transfer Students

A 3.0 overall GPA is required of all students as an entrance and maintenance requirement for the CMSD program. Fall semester will be the only start of the CMSD sequence until the following fall semester. A 3.0 overall GPA is required to enter the program plus completion of 51 hours, including Areas A-E of the Core, LING 2100 and 2 courses selected from CLAS 1030, SPED 2000, HPRB 3190, CHEM 1110, 1110L and CBIO 2210-2210L. Forty-five of the last 60 semester hours must be earned at UGA.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred course in Area E:</i> PSYC 1101	
Area F:	18
CSCI 1100-1100L; EFND 2030; EPSY 2020; PHIL 1500 or 2200 or 2500; SPCM 1100 or 1500 or 2510; STAT 2000	
<i>Major Requirements:</i>	30
CMSD 4090, 4130, 4150, 4520, 4530, 4710, 5000, 5790; CMSD (LING) 4120, 4140, 4500	

Major Electives:	20
CBIO 2210-2210L; CHEM 1110, 1110L; CLAS 1030; HPRB 3190; LING 2100; SPED 2000	
General Electives:	9
Either foreign language courses or 2000-level (or higher) courses in any area of interest selected by the student and approved by the academic advisor. At least one course must be taken from a department-maintained list of courses with multicultural emphasis or content.	
Upper division (6 hours)	
Any level (3 hours)	
Total hours required	120

Comparative Literature

Degree

Bachelor of Arts (A.B.)

Contact Person

Masaki Mori
Undergraduate Coordinator
cmsmamo@uga.cc.uga.edu
(706)542-2360

Department

Comparative Literature
College of Arts and Sciences

Description of the Program

Comparative Literature is the study of common features in the literatures of more than one culture. It can focus on a genre, a period or a theme, or it can focus very broadly on the materials of literature itself—structure, rhetoric or language. With such a broad focus, Comparative Literature defines itself in terms of theory and method. Students can use a Comparative Literature background in a variety of ways. Generally speaking, anyone who is professionally interested in the interpretation of the written or spoken word—whether lawyer, businessperson, writer or humanities professor—can profit from the theory and methods of comparative literature.

Career Opportunities

Opportunities for graduates include graduate study, education, foreign service, and international business.

Expectations of Transfer Students

The undergraduate major program in Comparative Literature has no entrance requirements that differ from the entrance requirements for the College of Arts and Sciences as a whole. The prerequisites to early courses in the major are stated in the Area F requirements for the major.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: At least one 2000-level CMLT course and other courses in ARHI or ARTS, CMLT, DRAM, MUSI, PHIL, or RELI

Area F:

Foreign language through the second semester; two 2000-level CMLT literature courses (three hours may be satisfied under Area C); electives from AFAM, ARAB, ARGD, ARHI, ARID, ARST, ARTS, CHNS, CLAS, DRAM, ENGL, FREN, GREK, GRMN, HIST, ITAL, JPNS, KREN, LATN, LING, MUSI, PHIL, PORT, RELI, ROML, RUSS, SPAN, SWAH, WMST, YORB

Major Requirements:

Thirty hours in CMLT at the 3000/4000 levels, not more than three of which may be taken at the 3000 level, including CMLT 4010, 4020, and one CMLT course from each of the following categories: history, theory, other traditions

Major Electives:

Foreign language through third and fourth semesters

General Electives:

Upper division (9 hours)
Any level (15 hours)

Total hours required

Minors in Comparative Literature, Chinese Language and Literature, and Japanese Language and Literature

Contact the department for requirements.

Computer Science

Degree

Bachelor of Science (B.S.)

Contact Person

E. Rodney Canfield
Department Head
(706)542-2911

Department

Computer Science
College of Arts and Sciences

Description of the Program

Computer science deals with the logical and mathematical foundations of computing and how to implement problem solutions as programs in a

computer language. The computer science curriculum covers the design principles of key computing technologies such as hardware, operating systems, database systems, networks, graphics, and artificial intelligence. Mathematical reasoning is emphasized throughout the program.

Career Opportunities

Computer science continues to be one of the fastest growing career fields in the nation. There are critical demands for technically trained persons to provide technical support for computer operations, and to develop new computer hardware and software systems. Recent graduates of the University of Georgia Computer Science Department are employed by major computer manufacturers, software development corporations, the communications industry, consulting firms, and a host of other areas. Still other graduates have continued their education in Computer Science at excellent graduate schools.

Expectations of Transfer Students

In order to be classified as a major in the Department of Computer Science and eligible to take major level courses, a student must have completed the following minimum requirements: a. Have a University of Georgia cumulative grade point average of 2.0 with at least 30 credit hours in residence at the University and 59 credits towards a degree program, and b. Have completed the following courses with no grades below B: CSCI 1302, CSCI(MATH) 2610, and MATH 2200.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CSCI 1301-1301L and MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

MATH 2210, 2210L; CSCI 2110, 2670, 2720; two hours of CSCI or MATH course from Area D

Major Requirements: 16

CSCI 4370, 4570, 4720, 4730

Major Electives: 14

Choose 14 hours from CSCI 4050, 4140, 4210, 4350, 4370, 4470, 4490, 4500, 4520, 4570, 4720, 4730, 4760, 4810, 4900, 4950; CSCI(ARTI) 4540; CSCI (PHIL) 4550; MATH (CSCI) 4630, 4670, 4690

General Electives:

30

(Refer to College-wide requirements when selecting general electives)

Upper division (9 hours)

Any level (21 hours)

Total hours required

120

Minor in Computer Science

Contact the department for requirements.

Consumer Economics

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Anne Sweaney

Interim Head and Professor

asweaney@fcs.uga.edu

(706)542-4877

Department

Housing and Consumer Economics

College of Family and Consumer Sciences

Description of the Program

This program provides preparation to deal with the management of resources from the household to the corporate level, with emphasis on the analysis of consumer issues and related policy questions. Students may obtain an emphasis in family financial management. The program provides preparation for graduate study, or it may be used as a pre-professional degree for areas such as law or business. The major allows the student to design a course of study best suited to his or her particular career goals and interests.

Career Opportunities

Students are often employed as middle managers in business, public administration, consumer groups, family advocacy agencies, with public utilities and extension services. Additional career opportunities involve responsibilities in consumer affairs, marketing, financial counseling and media information. An emphasis in family financial management may lead to careers in consumer credit, counseling agencies, financial service firms, or social service agencies.

Expectations of Transfer Students

Students transferring into the Consumer Economics major should have fulfilled the core curriculum requirements, including social science, humanities, and English. Students should have also completed micro and macroeconomics, introductory statistics, computer science and precalculus mathematics or logic.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1100

Preferred courses in Area E: ECON 2100, 2105, and 2106

Area F: 18

HACE 2100; MATH 1113; STAT 2000; 8 hours from ACCT 2101, 2102 (required for Family Financial Management Emphasis); CHFD 2100; CSCI 1301-1301L; FDNS 2100; LEGL 2700; MATH 2200, 2200L, 2210, 2210L; PSYC 1101; SOCI 1101; TXMI 2100

Major Requirements: 46-49

ECON 2105, 2106; HACE 2000, 3100, 3150, 3200, 3300, 4100, 4200

Consumer/Family Economic Emphasis: HACE 5100, 5150, 5910 (3-6 hours), 12 hours of HACE courses

Family Financial Management Emphasis: FINA 3000; HACE 5200, 5250, 5910 (3 hours); MGMT 2090; MSIT 3000; RMIN 4000

General Electives: 11-14

Consumer/Family Economics Emphasis

Any level (11-14 hours)

Family Financial Management Emphasis

Upper division (3 hours)

Any level (11 hours)

Total hours required 120

Minor in Consumer Economics

Contact the department for requirements.

Consumer Foods

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Ruthann Swanson
Assistant Professor
rswanson@fcs.uga.edu
(706) 542-4834

Department

Foods and Nutrition
College of Family and Consumer Sciences

Description of the Program

Consumer Foods is directed towards helping consumers select food products that are consistent with their cultural and socioeconomic status and lifestyle preferences. Majors also apply their knowledge about the chemical, physical, and microbio-

logical characteristics of food to the selection, preparation, home processing, storage and serving of safe food to the consumer.

Career Opportunities

Consumer Foods prepares students for careers with food service organizations, the Cooperative Extension Service, and commodity groups; industry, including consumer affairs, test kitchens, and quality control; and research in government, university, and private sector laboratories. A student should confer with his/her advisor to tailor a sequence of supporting courses and electives to meet his/her professional interests.

Expectations of Transfer Students

It is recommended that students transferring to the Consumer Foods major have courses in English composition, math, elementary statistics, economics, speech communication, and either general chemistry or biology. Foods and nutrition courses taken during the junior year have general chemistry, organic chemistry, and biology as prerequisites.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100 or 1500

Preferred courses in Area D: CHEM 1211, 211L, BIOL 1103-1103L or 1107-1107L, and STAT 2210

Preferred courses in Area E: ANTH 1102 and PSYC 1101

Area F: 18

BIOL 1104-1104L or 1108-1108L; CHEM 1212, 1212L, CHEM 2100, 2100L or 2211, 2211L; CHFD 2100 or HACE 2100; three hours from PSYC 1101; SPCM 1100 or 1500; STAT 2000 or 2210

Major Requirements:

ADPR 3100; FDNS 2000, 2100, 3100, 3600-3600L, 4600, 4630, 4640, 4650; FDST 3000; HACE 3100; MIBO 2500-2500L or 3500

Major Electives:

10-13

Equipment Courses

Choose one course from FDNS 3610-3610L; FDST 4080-4080L; HACE 4350

Problem-solving Courses

Choose one of the following: FDNS 4540 and 4050 or 4510; FDNS 4610 and 4620; FDNS 5020; FDST 4090-4090L and 4110-4110L

Communication Courses

Choose one course from EPSY 2020; FDNS 4660; SPCM 1800, 2300, 2510, 2520

General Electives: 10-13

(0 to 3 hours must be upper division)

Any FDNS or FDST course not taken to meet requirements above

Choose any course from the following, but not taken to fulfill the options under Area F, or major electives: ACCT 1160; ADPR 3110, 3120, 3850; BCMB (BIOL)(CHEM) 3100; BIOL 1103-1103L or 1107-1107L; CBIO 2210-2210L or VPHY 3100; CHEM 1211, 1211L, 2212, 2212L; CHFD 2100, 2950-2950L; CHFD 4850 or 4870; ECON 2106; HACE 2100, 3200, 5100, 5150; HPRB 1710, 1850, 3020, 4400; LEGL 2700, 4600; PSYC 1101; SPCM 1100 or 1500; STAT 2000 or 2210; STAT 4210

Total hours required 120

Consumer Journalism

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Teresa Mauldin
Associate Professor
tmauldin@fcs.uga.edu
(706)542-4854

Department

Housing and Consumer Economics
College of Family and Consumer Sciences

Description of the Program

The Consumer Journalism major includes courses from the College of Family and Consumer Sciences and the College of Journalism and Mass Communication. It is designed to prepare graduates for work requiring knowledge from the Family and Consumer Sciences areas enhanced by communication skills.

Students enter a variety of occupations including public relations, magazine writing, newspaper writing, as well as radio and television. The emphasis within an occupation focuses on areas such as consumer economics, consumer foods, merchandising, interiors, housing, or one of the other areas offered in the College.

Career Opportunities

Career opportunities for Consumer Journalism students are endless. Graduates may pursue a career in either concentration or they can combine

their concentrations for a more specific career choice. Below are some of the degree combinations and possible careers that can be obtained with them: Consumer Economics/Broadcast News-Consumer Affairs Reporters; Publication Management/Interiors-Editor for home furnishings magazines such as *Southern Living*; Child and Family Development/Public Relations-Community Affairs Director for a Children's Hospital; Fashion Merchandising/Magazine-Retail Buyer; Textiles/newspapers-Textile industry associations; Foods and Nutrition/Telecommunication Arts-Producer for TV shows on nutrition and diet; Housing/newspapers-non-profit housing associations.

Entrance Requirements

A minimum GPA of 2.5 is required for entry to this major.

Expectations of Transfer Students

Students transferring into the consumer journalism major should have fulfilled the core curriculum requirements, including those under social science, humanities, English, and science. Students should have also completed macroeconomics and a social science class in anthropology, sociology, or psychology.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1100

Preferred course in Area E: ECON 2106

Area F: 18

CHFD 2100; FDNS 2100; HACE 2100; TXMI 2100; choose 6 hours from ACCT 2101, 2102; CSCI 1301-1301L; LEGL 2700; MATH 1113; PSYC 1101; SOCI 1101; STAT 2000

Major Requirements: 33

HACE 2000; JRLC 5040; 12 hours in an area from Family and Consumer Sciences; 18 hours in an area from the College of Journalism and Mass Communication

Major Electives: 9

Choose one of the following: 9 hours of internship; 9 hours of additional Family and Consumer Sciences or Journalism and Mass Communication courses

General Electives: 18

At least 39 hours of the degree program must be upper division.

Total hours required 120

Criminal Justice

Degree

Bachelor of Arts (A.B.)

Contact Person

Susette M. Talarico, Ph.D.

Director of Criminal Justice Studies

talarico@uga.cc.uga.edu

(706)542-7079

Department

Political Science

College of Arts and Sciences

Description of the Program

Criminal Justice at UGA is an undergraduate program that has been in operation for more than 20 years. The program offers an A.B. in Criminal Justice. Criminal Justice at UGA operates as an interdisciplinary program and draws its courses from cooperating departments. These include Political Science, Psychology, Sociology and other departments in the College of Arts and Sciences. In addition to coordinating this interdisciplinary curriculum, the Criminal Justice Studies Program offers a variety of services and programs for students. These include quarterly newsletters, new major orientation meetings, career seminars, and an exchange program with selected universities in England, among others. Additionally, an undergraduate student organization, the Criminal Justice Society, offers several programs for student members.

Career Opportunities

There are a variety of career opportunities for students who study Criminal Justice. These include but are not limited to law enforcement at the local, state or federal level, state or federal probation and parole, corporate security, juvenile services and justice, family services, criminal prosecution or defense, and institutional corrections. Please note that some of these careers may require advanced degrees (e.g., J.D.) in addition to the A.B.

Entrance Requirements

Criminal Justice at UGA operates on a selective admissions system. Students interested in majoring in Criminal Justice must have completed 45 semester hours and have a minimum 2.3 GPA to apply. Please note that meeting the minimum requirements for application does not insure admission. Applications for the major are due at the mid-point of each semester and are reviewed by a faculty committee for decision.

Expectations of Transfer Students

Potential transfer students should concentrate on core requirements before transferring to UGA and

should plan to take most, if not all, major courses at UGA. When applying to transfer, students interested in criminal justice should specify pre-criminal justice/Arts and Sciences on their applications. Criminal Justice at UGA operates on a selective admissions system and transfer students must have a full term in residence at UGA prior to application.

Program Requirements

Semester Core Curriculum

Areas A-E:

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area D: STAT 2000

Preferred course in Area E: PSYC 1101

Area F:

STAT 2000

Introductory courses in Political Science, Psychology, and Sociology, if not taken in Area E

Three courses in a foreign language (Spanish and Oriental languages are recommended, but students are free to select the specific language.)

Major Requirements:

(Other social science methodology courses can be substituted with the approval of the CJSP director)

POLS 3600; POLS(SOCI) 3700, 5500, 5510, 5520; SOCI 3810

Choose two courses from AFAM(PSYC) 3150; GEOG 3630, 4630; PHIL 4210; POLS 4560, 4620, 4630, 4640, 4650; PSYC 3300, 3510, 4200, 4600; SOCI (AFAM) 2020, 2820, 3300, 3310, 4370; SOCI 2420, 2850, 3280, 3320, 3730, 3850, 3950; SPCM 4330, 4510

Choose three courses from the following (at least two of the following areas must be represented):

Human Behavior, Deviance, and Crime
AFAM(PSYC) 4500; PSYC 3230, 3260, 3510; SOCI 2470, 3070, 3820, 3830, 3860

Social Control Institutions

POLS 4740, 4900; PSYC 5850; RELI 4107; SOCI 3140, 3150, 4470

Law and Ethics

HIST 4060; PHIL 2200, 4240; POLS 4700, 4710, 4720, 4730; SOCI 4830

General Electives:

(Refer to College-wide requirements when selecting general electives.)

Upper division (5-18 hours)

Any level (8-22 hours)

Total hours required

Hours

42

18

33-34

26-27

120

Internships

All Criminal Justice majors must complete a full semester internship (POLS(SOCI) 5500, 5510, 5520) that consists of work in a criminal justice or related agency and that carries extensive academic requirements. To qualify for this mandatory internship, students must have an overall GPA of 2.2 and a major GPA of 2.5. Also, all prospective interns must sign a waiver of liability form.

Student Exchange Opportunities

As noted earlier, Criminal Justice Studies offers a student exchange program with selected universities in England. UGA Criminal Justice majors may spend one semester or a full academic year at Lancaster or Leicester University in England. Exchange students pay their regular UGA tuition (with all forms of scholarships and student aid except for Work Study applying) and then take courses at one of the two universities specified. Room and board costs in England are comparable to what students pay here at UGA. Exchange students may also intern with a British criminal justice agency.

Minor in Criminal Justice

Contact the program for requirements.

Crop Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

William K. Vencill

Associate Professor and Undergraduate Coordinator

wvencill@uga.cc.uga.edu

(706)542-3117

Department

Crop and Soil Sciences

College of Agricultural and Environmental Sciences

Description of the Program

Crop scientists use plants to produce food and fiber for humans and feed for animals. The program of study includes basic and applied courses that allow students flexibility in preparing for a career in the dynamic field of crop science. Elective courses in genetics, chemistry, computer science, animal sciences, botany, economics, business, engineering, entomology, plant pathology, and other areas are available.

Many courses in the crop science major include laboratories in which students obtain experience related to their course work. A special problems course in crop and soil science awards academic credit for experience in research. Leadership training is provided through the Agronomy Club and other campus activities.

Career Opportunities

Business and Industry: International seed and agricultural chemical companies employ crop scientists as technical, research, marketing, sales, and information specialists. Many crop scientists are also employed by regional and local agricultural firms as production and marketing managers, land use experts, quality control specialists, and information and computer analysts.

Public service: Federal, state, and local agencies employ crop scientists in numerous technical, information, and regulatory agencies such as the Agricultural Extension Service, Natural Resources Conservation Service, Environmental Protection Agency, State Environmental Agencies, Public Health Service, Forest Service, Agricultural Statistics Service, Peace Corps and the Foreign Agriculture Service. Crop scientists also are employed as teachers and researchers in community colleges and universities.

Self-employment: Many crop scientists are self-employed producers of field crops, livestock, fruits, and vegetables. Crop scientists are seed and agricultural supply dealers, consultants for soil and plant uses, and brokerage and contract agents for agricultural products.

Expectations of Transfer Students

Incoming transfer students must have a minimum 2.3 GPA.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L or BTNY 1210-1210L; CHEM 1211, 1211L; and MATH 2200, 2200L

Area F: 18

BIOL 1108-1108L or BTNY 1220-1220L; CHEM 1212, 1212L, 2100, 2100L; CRSS 2010-2010L; PHYS 1111-1111L or 1211-1211L

Major Requirements: 32

BTNY 3830-3830L; CRSS 3050-3050L, 3300, 4270, 4340-4340L, 4590-4590L; ENTO 3740-3740L; PATH 3530-3530L; PGEN 3580-3580L; STAT 2000

Major Electives:

Choose 11 hours from ENTO(CRSS) 4250-4250L; CRSS 3270-3270L, 3910, 4040, 4260, 4400 11

General Electives:

Any level 17

Total hours required 120

Scholarships

Numerous opportunities for financial assistance are available. These include the Georgia Crop Improvement Association scholarship; Georgia Seedsmen's Association Roy C. Jones Scholarship; J. Frank McGill "Up with Peanuts" Scholarship; Agronomy Club Scholarships; Georgia Ag Chem Society Scholarship; Georgia Chapter American Society of Agronomy Scholarship; Georgia Association of Conservation District Supervisor's Scholarship.

Internships

Many Crop Science students obtain valuable training and experience through internships available from industry and public sector. Internships provide practical experience in crop sciences, and students may arrange to receive course credits for internships. Part-time or full-time internships may be arranged with experiment stations, businesses, industries, or government agencies. Scientists in the Department of Crop and Soil Sciences offer work-study opportunities to students to assist in research.

Minor in Crop Science

Contact the department for requirements.

Dairy Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Robert S. Lowrey
Professor and Undergraduate Coordinator
rlowrey@uga.cc.uga.edu
(706)542-1852

Department

Animal and Dairy Science
College of Agricultural and Environmental Sciences

Description of the Program

The thriving dairy industry in Georgia is an important segment of the agricultural economy. The modern industry requires personnel trained in business, economics, and management as well as the traditional dairy science courses. Courses of a more basic nature may be emphasized by students who desire careers in science-related fields or who wish to pursue graduate or professional study. This major is highly recommended for persons planning to enter a program of study in veterinary medicine.

Career Opportunities

The curriculum in dairy science prepares the student for a career in dairy farm operation as a manager or owner; in sales of equipment, animal health products or feed; in field services with

processing plants, feed manufacturers, breed associations, and marketing agencies; in college research and teaching; as county extension agents, vocational agriculture teachers, or research technicians.

Expectations of Transfer Students

Students should have taken the following courses: BIOL 1107-1107L, 1108-1108L; CHEM 1211, 1211L, 1212, 1212L; Organic Chemistry; MATH 1113.

Special Requirements

Students must have an overall 2.0 GPA in major courses.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100 (take under general electives if not taken in Area C)

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and either CSCI 1100-1100L, MATH 2200, 2200L, or STAT 2000

Area F:

18

ADSC 2000-2000L, 2010, 2010L; BIOL 1108-1108L; CHEM 1212, 1212L; CHEM 2100, 2100L or 2211, 2211L

Major Requirements:

39-40

ADSC 3110, 3300-3300L, 3310-3310L, 3400-3400L, 3420, 3620-3620L, 3810, 3910, 4010

Choose one course from ADSC 3600-3600L, 3610-3610L, 3630-3630L, 3640-3640L

Choose one course from ADSC 3200-3200L; ADSC(FDST) 3650-3650L

Choose one course from ADSC 3180-3180L, 3210-3210L, 3230-3230L, 3260-3260L; EBUS 4010; ENGL 3590; SPCM 2100

Choose one course from AAEC 2580; ECON 2106

Choose one course from CRSS 2010-2010L, 3050-3050L

Major Electives:

10-12

Choose 10 to 12 hours from AAEC 2020-2020L or higher; ADSC 2300 or higher; ADSC(FDST) 3650-3650L; BCMB (BIOL) (CHEM) 3100; CBIO 3000-3000L; CBIO (BIOL) 3300, 3400; CSCI 1301-1301L; CRSS 2010-2010L; 3050-3050L, 4260; EETH(AGRI) 4190;

GENE 3580; GENE (BIOL) 3204; MGMT 2090, 2090L; MATH 2200, 2200L; MIBO 3500, 3510L; PHYS 1111-1111L, 1112-1112L; POUL 2020-2020L, 3600; VPHY 3100

General Electives: 8-11

Upper division (0-9 hours)

Any level (0-11 hours)

Total hours required 120

Scholarships

Scholarships are available to Dairy Science majors through both the College of Agricultural and Environmental Sciences and the Animal and Dairy Science Department.

Internships

All Dairy Science majors are required to complete an internship as a part of the undergraduate program requirements.

Minor in Dairy Science

Contact the department for requirements.

Dance Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Mark Wheeler

Department Head

mwheeler@uga.cc.uga.edu

(706)542-4415

Department Name

Department of Dance

College of Education

Description of the Program

Dance majors select one of four areas of emphasis: *school certification*, *performance and choreography*, *pre-dance therapy*, or *studio management*. These programs of study have been designed to enable the dance student to develop technical proficiency and choreographic ability; to gain experience in production, performance, and teaching; to explore the scientific, philosophical, and historical foundations of dance; to consider the relationship of dance to other art forms and to related areas of study; to understand the function of dance as an educational tool and to become familiar with current research, problems and issues in dance education; and to experience dance as a total theater experience. Opportunities are provided for guided teaching experiences and individual study.

Career Opportunities

Each of the areas of emphasis within the dance major includes a University Core of required

courses, a Dance Core which varies little from one area of emphasis to another, and twelve to fifteen semester hours of courses related directly to the separate area of emphasis. Students typically make a firm decision as to their area of emphasis during their first year-and-a-half in the department. The Department of Education for the State of Georgia has established guidelines for teacher certification in dance, and students electing to fulfill requirements of the public *school certification* area of emphasis will be certified to teach dance in Georgia's public schools, grades K-12. Students coming to us from outside Georgia and wishing to teach in the schools of their home states find that certification requirements vary little from state to state. The *performance and choreography* area of emphasis prepares the talented student to pursue a career as a performing artist and creator of dance art. Depending upon employment demand and the student's level of technical and artistic accomplishment, professional opportunities exist in local, regional, and national dance companies. *Dance therapy* is a relatively new career area. The field is wide open in terms of employment opportunities, with positions being created in areas related to emotional disability, physical therapy, industrial recreation and gerontology. While the Southeast is a region in need of individuals holding certificates in dance therapy, continued education at the graduate level is required for a dancer who wishes to become a registered dance therapist (D.T.R.). The *studio management* area of emphasis permits the student to grow as a dancer while gaining the rudimentary business skills demanded of managing a successful commercial studio. Many communities have need for commercial studios where children and adults alike can receive dance instruction from professional teachers possessing considerable background in performance and production, a commitment to full aesthetic potential of dance, as well as a firm knowledge of the structure of the human body.

Entrance Requirements and Expectations of Transfer Students

Incoming freshmen and transfer students are required to audition for admission into the dance major program. Contact the Department of Dance at 542-4415 for information on annual auditions occurring in November and January. The audition process is separate from students' admissions applications to the Office of Admissions. To transfer to the dance degree program from another institution or from another UGA degree program, a student must have a GPA of 2.3.

Any student intending to transfer at the junior level must attend an audition during the previous

year. Audition dates are available from the department office. Students admitted as transfer dance majors must be proficient dancers. Due to the technical performance demands of the program and to the rotation of required course work, most junior transfers should expect to spend three years studying in the dance major program. Highly proficient dancers transferring with credit for required studio and theory courses from other college/university dance programs might be able to fulfill graduation requirements two years after transferring.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

Choose a minimum of 7 hours from the following (these are repeated for two consecutive semesters before advancing to next level): DANC 1650, 1660, 2650, 2660

Choose 5 hours from DANC 2020, 2620, 2630, 2640

Choose a minimum of 6 hours from the following:

School Certification

EPSY 2020; 3 hours from ARTS 2000, 2050; MUSI 2020, 2080

Performance and Choreography

DRAM 2010; SPCM 1500

Pre-Dance Therapy

CHFD 2950-2950L; EPSY 2020; PSYC 2570 or 2580; SPED 2000

Studio Management

ACCT 2101; CHFD 2950-2950L; DRAM 2010; EPSY 2020; SPCM 1100, 1500

Major Requirements:

CBIO 2200-2200L; DANC 3000, 3010, 3200, 3210, 3400, 3620, 3640, 3650*, 3660*, 3700, 4010, 4020, 4100, 4300, 4400, 4500, 4510, 4650*, 4660*, 4700, 4800, 5460 (School Certification only); EXRS 3600

*Repeated once.

Major Electives:

Choose 8 hours from DANC 1250, 2250, 2850*, 3250, 3670, 3680, 3720, 3850*, 4000, 4010, 4250, 4640, 4670, 4680, 4720, 4850, 5670, 5680, 5850

*Repeated once; four hours required for Performance and Choreography students.

School Certification

EFND 2030; PEDS 4610

Pre-Dance Therapy

PEDS 4610; choose three hours from MUSI 4000, 5400, MUSI 5420 or 5450; PSYC 3230; SPED 3040

Studio Management

Choose 6 hours from ADPR 3100, 3850; DRAM 3300; MGMT 3000, 5530

Performance and Choreography

Choose 6 hours from ARHI 3060; ARST 4800; DRAM 3300, 4280; MUSI 4270; PHIL 4230; SOCI 3280

Total hours required

120

Scholarships

Dance majors are eligible to audition for Lucy Lampkin Dance Scholarships and for the "Friends of Dance" Senior Scholarship to assist with tuition and other school expenses. The Young Choreographer's Series Scholarship, awarded to dance majors distinguishing themselves in the YCS productions, assists students with costs associated with study in accredited summer dance study programs.

Internships

Depending upon the chosen area of emphasis, students fill internships in public and private schools K-12, mental health clinics, and private dance studios and arts centers throughout the State of Georgia.

Minor in Dance Education

Contact the department for requirements.

Dietetics

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Joan Fischer
Assistant Professor
jfischer@fcs.uga.edu
(706) 542-7983

Department

Foods and Nutrition
College of Family and Consumer Sciences

Description of the Program

The field of dietetics offers many opportunities related to foods and nutrition in health care, management, education, business, and industry settings. The dietetics major meets educational requirements established by the Commission on Accreditation/Approval for Dietetics Education for the American Dietetics Association. Upon completion of the undergraduate degree, students must complete a supervised practice experience,

such as an accredited dietetic internship, to become eligible to take the Registration Examination for Dietitians.

Career Opportunities

Clinical dietetics positions are available in hospitals, clinics, health maintenance organizations, long-term care facilities, and private practice. Other opportunities include management of food or nutrition care services in health care facilities, schools or restaurants; public health nutrition; research and/or education in universities, medical centers, and government agencies.

Expectations of Transfer Students

Students who have completed two years of college work and are planning to transfer into this major are expected to have completed courses in math, elementary statistics, psychology or sociology, and fundamentals of speech communication. In addition, biology, general chemistry, organic chemistry and human physiology are prerequisites for required foods and nutrition courses taken during the junior year of study. *Note:* General chemistry courses should be equivalent to CHEM 1211, 1211L and 1212, 1212L and organic chemistry courses should be equivalent to CHEM 2211, 2211L and 2212, 2212L..

Program Requirements

Semester Core Curriculum Hours

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100

Preferred courses in Area D: CHEM 1211, 1211L, BIOL 1103-1103L or 1107-1107L, and STAT 2000 or 2210

Preferred courses in Area E: ANTH 1102 and PSYC 1101

Area F: 18

BIOL 1104-1104L or 1108-1108L; CHFD 2100 or HACE 2100; CHEM 1212, 1212L, 2211, 2211L; MIBO 2500-2500L

Major Requirements: 49-50

BCMB(BIOL)(CHEM) 3100; CBIO 2200-2200L; CBIO 2210-2210L or VPHY 3100; FDNS 2000, 2100, 3100, 3600-3600L, 3610-3610L, 4100, 4510, 4520, 4530, 4540, 4600, 4610, 4620

Major Electives: 10-11

Choose 10 to 11 hours from the following (upper division 0-1 hours): ACCT 1160; BIOL 1103-1103L or 1107-1107L; CHEM 1211, 1211L, 2212, 2212L; CLAS 1030; EXRS 4300, 4320, 4630-4630L, 4690-4690L; FDNS 4560, 4580,

4630, 4640, 4650, 4660, 4720, 5030, 5800; PSYC 1101; SPCM 1100 or 1500 or 2100 or 2300 or 2510; STAT 2000 or 2210

Total hours required

120

Drama

Degree

Bachelor of Arts (A. B.)

Contact Person

Mrs. Sylvia J. H. Pannell
Undergraduate Coordinator
hillyard@uga.cc.uga.edu
(706)542-2091

Department Name

Drama and Theater
College of Arts and Sciences

Description of the Program

Students majoring in Drama will pursue the A.B. degree which is designed to offer a liberal arts education with an emphasis in drama. After satisfying a basic core of drama courses, the student may concentrate in acting, design, or writing.

Career Opportunities

Graduates with degrees in Drama frequently attend graduate school in a wide range of fields, including drama and theatre, business, law, telecommunications, and other people-related disciplines. Drama produces students who are well-rounded people with a wide range of abilities, people who are comfortable working as a team, people who can think on their feet, analyze situations thoroughly, communicate effectively, and produce excellent results under pressure. These are precisely the kinds of abilities employers in business and industry look for in an employee.

Expectations of Transfer Students

The Department of Drama prefers that students who plan to transfer into the major finish the general core curriculum requirements in order to focus on major course requirements as juniors and seniors.

Program Requirements

Semester Core Curriculum Hours

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: Choose one course from the following: DRAM 2000, 2120, or 2130

Preferred courses in Area E: PSYC 1101 and either GEOG 1125-1125D or ANTH 1102

Area F:	18
Two semesters of a foreign language	
A second literature course	
A fine arts course (art or music)	
Choose one course each from two of the following areas: History; English (dramatic literature); Classics; Comparative Literature or a literature course in another language; Philosophy; or Religion	
Major Requirements:	21
DRAM 2040, 2050, 2060, 3200, 3210, 3290, 3300, 3500, 5053	
Major Electives:	18
Choose six three-hour DRAM courses numbered 3000-level or above	
General Electives:	21
(Refer to College-wide requirements when selecting general electives.)	
Upper division (3 hours)	
Any level (18 hours)	
Total hours required	120
Minor in Drama	
Contact the department for requirements.	

Early Childhood Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Freida Thornton

Senior Academic Advisor

freida@uga.cc.uga.edu

(706)542-4244

Department

Elementary Education

College of Education

Description of the Program

This program provides extensive field experiences and a broad educational background to teach a variety of subjects in the early grades. Students must be admitted to Teacher Education before entering Block II. In order to move from one block to the next, students must complete all block courses with at least a grade of C, and maintain the 2.75 GPA required for admittance to Teacher Education.

Career Opportunities

Graduates are certified to teach all subjects in grades P-5.

Entrance Requirements

Entrance requirements include the following: a minimum of 45 completed semester hours, including all of Areas A, C, D, and E of the core; at least

one semester of a foreign language; CHFD 2950 or EPSY 2020, enrolled or completed; EFND 2030, enrolled or completed; GPA of at least 2.75; completion of 50 documented hours of Pre-Professional Experience; and PRAXIS I score (minimum score to be determined).

Expectations of Transfer Students

Students must transfer into The College of Education as "unspecified." See "Entrance Requirements."

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

Three hours of foreign language; EDIT 2010; EFND 2030; CHFD 2950-2950L or EPSY 2020 ; HPRB 2420 or CHFD 2100; PEDS 2420-2420L or MATH course; SPED 2000

* Before beginning the professional sequence, students must complete with C or better two courses in the same foreign language. Students may exempt by examination (if available) one or both of these courses. In addition, one accelerated course may be counted as the equivalent of two regular courses (if the home department designates the accelerated course as such). ** Courses in Area F are requirements for certification, requirements for entry into professional sequence, or prerequisites for other course work; if not included in Area F, must be included elsewhere in program of study.

Major Requirements:

EDEC(CHFD) 4020, 4030, 5460; ELAN 3110, 4120; EMAT 3400, 3410; ESCI 4420; ESOC 3420; READ 3420, 3430

Early Childhood Education - General
ARHI 3050; EDEC(CHFD) 4010, 4040;

MUSI 3050; three hours of foreign language

Early Childhood Education—Pre-Kindergarten-Grade 2 Emphasis

CHFD 4860, 5130; CHFD(EDEC) 5150; EDEC(CHFD) 4010; SPED(EDEC) 5100

Major Electives:

MATH 1700 3

General Electives:

Any level 2

Total hours required **120**

Ecology

Degree

Bachelor of Science (B.S.)

Contact Person

Dr. Frank B. Golley

Professor

fgolley@uga.cc.uga.edu

(706)542-2968

Department

Institute of Ecology

College of Arts and Sciences

Description of the Program

Ecology, the study of organisms and their environment, is an interdisciplinary science. Ecologists work at the interface of basic science fields such as biology, geology, chemistry, and mathematics, and may draw more broadly on subjects such as economics, public policy, environmental law, anthropology, and geography. There is a growing need to understand how organisms and the environment interact and to examine the influence of humans on the earth and its biodiversity.

This degree is designed mainly to prepare undergraduates for advanced graduate studies in ecology or allied applied disciplines leading to a Masters or Doctoral degree. Students planning to finish their studies at the B.S. level should discuss this with an advisor as soon as possible to design an appropriate program of study.

Students may elect to expand their experience through study abroad programs, internships with the Institute of Ecology or other sponsors, or independent research opportunities. These activities are strongly encouraged but are not required for the degree.

Career Opportunities

Many students completing this major will elect to enter graduate programs in Ecology or allied fields. Employment opportunities exist with consultant or environmental businesses that provide environmental services to local communities or industries. We see substantial opportunities in this sector of the economy, and encourage students to include appropriate broadening courses in their curriculum. These include writing and speaking skills as well as experience in conflict resolution.

Entrance Requirements

Students must have a minimum 2.0 GPA and should have completed CHEM 1211, 1212, BIOL 1107-1107L, and BIOL 1108-1108L.

Expectations of Transfer Students

Students should complete the science foundation courses for the major which include a year of general chemistry, mathematics courses through

integral calculus, a year of biology and, if possible, organic chemistry. Students with this background will be ready to immediately enroll in major classes.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Area F:

18

BIOL 1108-1108L; CHEM 1212, 1212L; MATH 2210, 2210L; PHYS 1111-1111L, 1112-1112L

Major Requirements:

26-29

ECOL(BIOL) 3500-3500L, ECOL 4000-4000L, 4010-4010L, 4950

Choose one course from ANTH(ECOL) 4210; BTNY 4650-4650L; CBIO(BIOL) 4600-4600L; ECOL 4030-4030L, 4040-4040L, 4050-4050L, 4060-4060L, 4070-4070L; ENTO 3140-3140L, 4000-4000L, 4010-4010L; FORS(ECOL) 3580-3580L

Choose 9 to 12 hours from ANTH 4070; BIOL 3700; CBIO(BIOL) 3400; ECOL 3070, 3520, 4110, 4960, 4990; ECOL(BIOL) 3510; ECOL (FORS) 4310-4310L; ENTO 4000-4000L, 4400-4400L, 4820-4820L; FORS(ECOL) 3580-3580L; GENE(BIOL) 3204, 4604; GEOG 4160, 4810; GEOG(BTNY) 4220, 4240; GEOL 4520; MARS 3450-3450L; MARS (MIBO) 4620; PATH(BTNY) 4200-4200L; STAT 4210, 4220, 4240, 4290, 4380

Major Electives:

7-8

CHEM 2211, 2211L; CHEM 2212, 2212L or BCMB(BIOL)(CHEM) 3100

General Electives:

23-27

(Refer to College-wide requirements when selecting general electives.)

Upper division (7-13 hours)

Any level (10-20 hours)

Total hours required

120

Internships

Students can receive credit (ECOL 4940) for approved internship experiences. Contact Professor Golley for details.

Economics

Degrees

Bachelor of Arts (A.B.), Bachelor of Business Administration (B.B.A.)

Contact Person

Matthew King
mking@rigel.econ.uga.edu
(706)542-1311

Department

Economics
Terry College of Business

Description of the Program

Economics is the study of resource allocation by individuals, business enterprises, and nations. A social science, it forms the foundation for understanding the various business disciplines. Its study combines analytical, empirical, and historical methods to reveal how an economy functions. This department offers a wide range of courses providing students with both breadth and depth in the subject. Economics gives a valuable preparation for careers in corporate, governmental, and consulting positions within the United States and internationally. It is an excellent major for those planning to attend law school; those contemplating an MBA degree will find that such programs consider economics majors highly desirable applicants. The field also prepares students for work in public administration, international business, and financial analysis.

Career Opportunities

Economics majors find employment in a variety of public and private sector positions. Economics majors are also well-prepared for graduate, law, or business school programs. Those who study economics at the University of Georgia combine a broad general education with training in analytical methods and economic institutions.

Entrance Requirements

Students accepted to Economics must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue a B.B.A. in this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements (B.B.A.)

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Preferred courses in Area C: SPCM 1500 (take under general electives if not taken in Area C)	
Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)	
Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)	
Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
Major Requirements:	34
FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; ECON 4010, 4020, 5900	
Choose four 3-hour courses selected from ECON courses numbered above 4000 (ECON 4000, 4030, and 4040 may not be used in the major).	
Choose one of the following: ACCT 4400, 5000; FINA 4320, 4420; LEGL 4300; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000	
Major Electives:	3
Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000	
General Electives:	23
(Refer to College-wide requirements when selecting general electives.)	
Five courses in Arts and Sciences	
One business course outside major	
Two courses outside department	
Total hours required	120
Program Requirements (A.B.)	
<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2105 and 2106 (take under general electives if not taken in Area E)

Area F: MATH 2200, 2200L; STAT 2000; two courses in a foreign language (through the third semester); additional courses in ANTH, ECON, GEOG (GEOG 1101-1101D, 1103-1103D, 1125-1125D, 2610; GEOG(ANTH) (CMLT)(HIST) (SOCI) 2100), POLS, PSYC, SOCI, or SPCM

Major Requirements: ECON 4010, 4020, 5900

Choose four 3-hour courses selected from ECON courses numbered above 4000

Six hours of major-related work from ANTH 4000; ECOL 3070; ENGL 3590, 3600, 4860; GEOG (ANTH) (CMLT) (HIST) (SOCI) 2100; GEOG 2610, 3620, 3630, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4710, 4720, 4730, 4740; HIST 3421, 3432, 3071, 3072, 3073, 4074; MATH 2210, 2210L or above; POLS 4000-level or above; SOCI 2750; STAT 4220 or above

Three to six hours from ACCT 2101, 2102; LEGL 2700; MGMT 2090

General Electives: (Refer to College-wide requirements when selecting general electives.)

Upper division (14-20 hours)

Any level (9-15 hours)

Total hours required

18

31

29

120

English

Degree
Bachelor of Arts (A.B.)

Contact Person
Dr. Rosemary Franklin
(706) 542-2258

Department
English
College of Arts and Sciences

Description of the Program
An A.B. in English emphasizes critical thinking, articulate self-expression, and a broad knowledge of English and American Literature, language history and usage, and the critical contexts that help us to interpret our own age as well as others. Although the program encourages breadth and

variety, it also offers ample opportunity for intensive study of particular interests, such as linguistics or creative and technical writing.

Career Opportunities

English is an excellent pre-professional major, whether the goal be study in law, medicine, or literature. Graduates also find professions in public relations, management positions, technical writing, publishing, and any career that demands writing, interpretation and solution of problems, and clear analytic thinking.

Freshman Placement Test.

All entering freshmen must take the departmental placement test. Performance on this test places a student in ENGL 1101 or 1102. A student placing in 1102 exempts 1101 with 3 hours credit. Exemption of 1101 or a grade of C or better in 1101, and a combined average of C (2.0) in 1101 and 1102, are both required for graduation.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> At least one course from CMLT 2210, 2220; ENGL 2310, 2320, 2330, 2400	
Area F:	18
Three to six hours of 2000-level English or American Literature courses from the following: ENGL 2310, 2320, 2330, 2340, 2400	
Three to six hours in the same foreign language (competency in one foreign language through the fourth semester required)	
Six to nine hours from at least two of the following areas: Fine Arts; Philosophy or Religion; History (European or British recommended); Classics, Comparative Literature, or a literature course in another language; Linguistics	
Major Requirements:	30
ENGL 3000 (should be completed in the first year of major course work)	
Choose three 3-hour ENGL electives at the 3000/4000 levels (at least one course at the 4000 level)	
<i>English Literature Before 1800</i>	
Choose 9 hours from ENGL 4210, 4220, 4230, 4240, 4290, 4300, 4320, 4330, 4340, 4350, 4360, 4370, 4390, 4400, 4420, 4430, 4440, 4490	

British Literature of the 19th and 20th Centuries

Choose 3 hours from ENGL 4500, 4520, 4530, 4590, 4660, 4670, 4680, 4690

American Literature

Choose 3 hours from ENGL 4620, 4630, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4860, 4880

Language, Criticism, and Culture

Choose 3 hours from ENGL 4000, 4010, 4040, 4060, 4110, 4170, 4180, 4640, 4650, 4800, 4820, 4830, 4850, 4870, 4890

Major Electives: 30

All electives are free unless two 2000-level literature courses or language competency to the fourth semester were not completed in the core. At least three electives must be taken at the 3000/4000-level.

Total hours required 120

Minor in English

Contact the department for requirements.

English Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Carol Spurgeon
Undergraduate Advisor
(706) 542-4521

Department

Language Education
College of Education

Description of the Program

This program prepares a student for a professional four-year certificate in Georgia for teaching English in grades 7-12. Requirements and prerequisites in the teaching field should be considered in choosing courses in the freshman and sophomore years. All prospective teachers should plan their program with their advisor. To enter the final teacher preparation program, students must have an overall GPA of 2.6. In addition, a 2.6 GPA must be maintained during the teaching program.

If there are more applicants for the Advanced Professional Education Course Sequence (APECS) than can be accommodated, admission will be determined by the date the applicant declared English Education as his or her major. Students who are delayed because of their late date of declaration will have priority for spaces the next time courses are offered.

Career Opportunities

Graduates are certified to teach English in grades 7-12 in the public schools of Georgia.

Entrance Requirements

Students must have an overall GPA of 2.6 or higher.

Special Requirements

Students in this major must maintain a 2.6 overall GPA, maintain a 2.6 teaching field GPA, and complete 6 of 8 teaching field courses before entering APECS.

Program Requirements

Semester Core Curriculum Hours 42

Areas A-E:
See Core Curriculum
Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18
SPCM 1100; EFND 2030; EPSY 2020; six hours of foreign language (two semesters above CPC or test out at 1002 equivalent); three hours of Fine Arts (e.g., ARTS 2000, DRAM 2000)

Major Requirements: 33

ELAN 3460, 3461, 4400, 4401, 4460, 4462, 5460; READ 4030; SPED 2000

Major Electives: 21

ELAN 4410; one course from ENGL 3000/4000-level (Shakespeare or British Literature); one course from ENGL 3000/4000-level (American Literature); one course from ENGL or CMLT 3000/4000-level (World Literature); one course from ENGL 3000/4000-level (World Literature); one course from LING or ENGL (Language Study); three hours of an elective from the following 3000/4000-level prefixes: CMLT, DRAM, ENGL, LING

General Electives: 6

Any level

Total hours required 120

Entomology

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

John All
Professor
jall@bugs.ent.uga.edu
(706) 542-7589

Department

Entomology
College of Agricultural and Environmental Sciences

Description of the Program

World-wide, insects destroy about one-third of the food and fiber we produce, and they transmit some

of the most devastating pathogens of plants and animals. On the other hand, insects pollinate many valuable food and forest crops, significantly increase the productivity of soils, and are important components in most food chains. A graduate in entomology should have a strong background in general biology and an understanding of the scientific method. Students learn to identify insects and other arthropods and study the biology and ecology of pests and beneficial insects in order to manage them efficiently. They should acquire a basic knowledge of agricultural production principles and how insects influence crop production. Students should also become knowledgeable about the effects of abiotic and biotic factors on insect development, population growth, species interactions, physiological requirements, and insect behavior.

Career Opportunities

Career opportunities are available for entomology graduates in industry, extension, consulting, and public research, including university laboratories and experiment stations, state and federal departments of agriculture, and the U.S. Public Health Service. A graduate will also be prepared to enter a program leading to the M.S. and Ph.D. degrees.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L or BTNY 1210-1210L, CHEM 1211, 1211L, and MATH 2200, 2200L	
Area F:	18
BIOL 1108-1108L; CHEM 1212, 1212L; CHEM 2100, 2100L or 2211, 2211L	
Choose 6 hours from BTNY 1220-1220L; CHEM 2212, 2212L; GEOG 1112, 1112L, 1113, 1113L; GEOL 1121, 1121L, 1122, 1122L; MATH 2200, 2200L, 2210, 2210L; PHYS 1111-1111L, 1112-1112L, 1211-1211L, 1212-1212L; STAT 2000, 2210	
<u>Major Requirements:</u>	21
ENTO 4000-4000L, 4010-4010L	
Choose 15 hours from ENTO 3140-3140L, 3650-3650L, 3740-3740L, 3820-3820L, 4400-4400L, 4740-4740L, 4820-4820L, 4960; ENTO(CRSS) 4250-4250L; CRSS(ENTO)(PATH) 3500	
<u>Major Electives:</u>	29-30
Select 29 to 30 hours in any of the following departments, but not to exceed 9 hours in a	

single department (with at least 9 hours of upper division course work):

College of Arts and Sciences: BCMB, BIOL, BTNY, CBIO, ECOL, GENE, MARS, MIBO

College of Agricultural and Environmental Sciences: AAEC, ADSC, AGCM, CRSS, EAGR, EHSC, ENGR, FDST, HORT, PATH, POUL

School of Forest Resources: FORS

School of Environmental Design: EDES, HIPR, LAND

General Electives: 9-10

Upper division (0-9 hours)

Any level (0-10 hours)

Total hours required 120

Scholarships

Departmental scholarships include the P.W. Fattig Scholarship and the Georgia Entomological Society Scholarship; contact the department for information. College-wide scholarships are also available. For more information, contact the Office of Academic Affairs in the College.

Internships

Internships are available but not required.

Environmental Economics and Management

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Steven C. Turner

Associate Professor and Undergraduate Coordinator
sturner@agecon.uga.edu
(706)542-0852

Department

Agricultural and Applied Economics
College of Agricultural and Environmental Sciences

Description of the Program

The environmental economics and management (EEM) major prepares students for public and private positions in natural and environmental resource analysis and management. EEM majors are trained to understand and appreciate the non-economic aspects of resource and environmental problems, including social, ecologic, physical, and legal considerations. EEM majors can serve effectively as members of interdisciplinary teams involved in resource and environmental management, planning, and analysis. An EEM major is designed for individuals who desire to "make a difference" when it comes to wise, efficient, and

productive management of public and private natural and environmental resources.

Career Opportunities

The linkages between economic activity and natural and environmental resources will be a major local, national, and global issue of concern in the coming decades. Natural resource and environmental problems create a demand for individuals who can offer alternative solutions to these problems. Government job opportunities currently include management, planning, and analysis positions with federal, state, and local government agencies. Private company opportunities include similar positions with utility companies, banks, consulting firms, and resource management companies. An EEM major also provides an excellent foundation for work on an advanced degree in natural resource and environmental management. An advanced degree may lead to a teaching, research, or public service career at a college or university, law school, or a position with a private research company.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area C: SPCM 1100 or 1500 (take under major electives if not taken in Area C).

Preferred courses in Area D: CHEM 1211, 1211L, BIOL 1107-1107L or BTNY 1210-1210L, and MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

AAEC 2580 or ECON 2106; STAT 2000; MATH 2110, 2210 or 2210L; 6 to 7 hours of electives; excess hour from Area D

Major Requirements: 31-32

AAEC 3060, 3580-3580L, 3610-3610L, 4650, 4930 or AAEC (EHSC) 4250; CRSS 3050-3050L or CRSS(FORS) 3060-3060L; ECOL(BIOL) 3500-3500L; EHSC 3060; ENGL 3590

Major Electives: 18

Select 18 hours from the following list: AAEC 2020-2020L, 3610-3610L, AAEC 3690 or FINA 3000, AAEC 3910, 4050, 4510, 4710, 4800, 4980; ANTH 4000; CRSS 4340-4340L, 4400; ECOL 3070; ECON 4150, 4200, 4300, 4400; EETH (AGRI) 4190; EHSC 4150, 4490; ENGR 3050, 3410; FINA 4600; FORS 3300, 4710-4710L, 4800-4800D, 5410, 5850;

FORS(RLST) 5400-5400L; GEOG 3620, 4630, 4670, 4810; LEGL(REAL) 5200; MGMT 3000, 4000, 4240, 4610, 5220, 5420, 5440, 5580, 5920; MARK 3000; PHIL(EETH) 4220; POLS 4630; REAL 4000, 5080; REAL(FINA) 5100; RLST 4870; STAT 4210, 4220, or an elective approved by the student's advisor

General Electives: 10-11

Any level (10-11 hours)

At least 12 hours of course work must be 4000-level or above.

Total hours required 120

Scholarships

Several scholarships are available to environmental economics and management majors through the College of Agricultural and Environmental Sciences and the Agricultural and Applied Economics Department. Information about these scholarships can be obtained from Steven Turner (sturner@agecon.uga.edu). For information about college-wide scholarships, contact the Office of Academic Affairs in the College.

Internships

Internships are available, but not required, for students pursuing the environmental economics and management major.

Environmental Health Science

Degree

Bachelor of Science in Environmental Health (B.S.E.H.)

Contact Person

Harold Barnhart
Professor and Coordinator
hbarnhar@uga.cc.uga.edu
(706) 542-2454

Department

Food Science and Technology
College of Agricultural and Environmental Sciences

Description of the Program

Environmental health scientists are in demand by private industries, consulting firms, governmental agencies, and institutions. A wide range of opportunities for employment exist in corporate environmental and occupational health departments, public health agencies, solid and hazardous waste management, general sanitation engineering, and pollution control. Environmental health scientists are employed in programs of water and air pollution control, industrial hygiene, occupational health and safety, and a variety of other activities by a

significant number of agencies and commercial concerns.

The need for environmental health scientists in Georgia is increasing and employment opportunities for academically qualified personnel are increasing proportionately. The demand for trained environmental health scientists, however, is not restricted to the state of Georgia. Due to the limited availability of college training programs for this field, numerous other states rely upon the resources of the University of Georgia for graduates in this subject matter area. Students successfully completing the program of study receive the Bachelor of Science in Environmental Health (B.S.E.H.) degree. Students may pursue their interests in the areas of environmental protection, industrial hygiene, or public health. The degree program is nationally accredited and is the only undergraduate environmental health program in Georgia.

Expectations of Transfer Students

A minimum 2.3 grade point average is required for students who transfer into the program. The decision for admission to the EHS program is made by an EHS faculty committee based on the student's qualifications and availability of space and resources.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 1211, 1211L, BIOL 1170-1170L, STAT 2000 (take under general electives if not taken in Area D)

Area F:
BIOL 1180-1180L; CHEM 1212, 1212L, 2211, 2211L; CBIO 2210-2210L; PHYS 1111-1111L; excess hours will be used in general electives

Major Requirements:
AAEC(EHSC) 4250; CHEM 2212, 2212L; EHSC 2010, 3060, 3800, 3910, 4080, 4150, 4490; MIBO 3500, 3510L; MMIB 4800; PHYS 1112-1112L; SPCM 1100

Major Electives:
Choose 16 hours from the following (at least two courses must be selected from the listed EHSC courses): BCMB (BIOL)(CHEM) 3100; CHEM 2300, 2300L; CRSS 3050-3050L or CRSS (FORS) 3060-3060L; ECOL (BIOL) 3500-3500L; ENGR 4480; EHSC 3260, 4100-4100L, 4350-4350L, 4590-4590L,

4610; FDST(EHSC)(MIBO) 4310-4310L, 4320-4320L; ENTO 3650-3650L; GEOL 4220 or FORS 4110; HPRB 4450; MMIB 4220

General Electives: 5
Any level (3 hours)
Two excess hours from Area F
Total hours required 120

Scholarships

Scholarships include the Rowe Award and the John J. Sheuring Scholarship. College-wide scholarships are also available. For more information, contact the Office of Academic Affairs in the College.

Internships, Cooperative Education

All environmental health students are required to complete an internship or co-op as a part of the Undergraduate Program Requirements.

Environmental Soil Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

William K. Vencill
Associate Professor & Undergraduate Coordinator
wvencill@uga.cc.uga.edu
(706) 542-3117

Department

Crop and Soil Sciences
College of Agricultural and Environmental Sciences

Description of the Program

Environmental soil scientists are in demand by governmental agencies, private industry, consulting firms and institutions. Opportunities for employment exist in various specialized programs within public agencies, such as the Environmental Protection Agency and the Natural Resource Conservation Service, in such areas as land disposal of hazardous and other industrial and agricultural wastes, water pollution control, and soil conservation. The need for environmental scientists in Georgia and the nation is increasing rapidly with a proportional increase in employment, promotional, and professional opportunities for academically qualified personnel.

Career Opportunities

Business and industry: International seed and agricultural chemical companies employ environmental soil scientists as technical, research, and information specialists. Regional and local agricultural firms also employ many environmental soil

scientists as land use experts, quality control specialists, and information and computer analysts. Environmental consulting firms employ environmental soil scientists to assess environmental conditions, monitor soil and water pollutants, reclaim disturbed lands, and prepare environmental policy.

Public service: Federal, state, and local agencies employ environmental soil scientists in numerous technical, information, and regulatory agencies such as the Agricultural Extension Service, Natural Resources Conservation Service, Environmental Protection Agency, State Environmental Agencies, Public Health Service, Forest Service, Agricultural Statistics Service, Peace Corps and the Foreign Agriculture Service. Environmental soil scientists also are employed as teachers and researchers in community colleges and universities.

Self-employment: Many environmental soil scientists are self-employed as consultants for soil and plant uses, and to assess environmental conditions, monitor soil and water pollutants, reclaim disturbed lands, and prepare environmental policy.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L or BTNY 1210-1210L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

BIOL 1108-1108L or BTNY 1220-1220L; CHEM 1212, 1212L, 2100, 2100L; GEOL 1250-1250L; PHYS 1111-1111L

Major Requirements: 28-30

CHEM 2300, 2300L; CRSS 3910, 4270; CRSS(FORS) 3060-3060L; STAT 2000

Choose four courses from the following: CRSS 4510, 4540-4540L, 4590-4590L, 4600-4600L, 4660-4660L, 4670; CRSS (MIBO) 4610-4610L

Major Electives: 15-17

Electives related to the major; choose three courses from CRSS 3990; EHSC 4150, 4490; ENGR 3050; FORS 4110; GEOG 4370-4370L; GEOL 4220

Science electives; choose 6 to 8 hours from BCMB (BIOL) (CHEM) 3100; BTNY 4650-4650L; CHEM 3211, 3300; CRSS 4340-4340L; CSCI 1301-1301L; ECOL (BIOL) 3500-3500L; EETH(AGRI) 4190; EHSC 3060, 4590-4590L; ENGR

1020, 3440; GEOG 4810; GEOL 3010-3010L, 3200, 4010-4010L; PHYS 1112-1112L; SOCI 2400; TXMI 3550

General Electives: 13-17

Upper division (0-10 hours)

Any level (3-17 hours)

Total hours required 120

Scholarships

Numerous opportunities for financial assistance are available. These include the Georgia Plant Food Educational Society J. Fielding Reed Scholarship; Georgia Association of Conservation District Supervisors Ladies Auxiliary; Agronomy Club Scholarship; Georgia Chapter American Society of Agronomy; Frederick B. Smith Soil Science Scholarship; and Georgia Association of Conservation District Supervisor's Scholarship. Also, college-wide scholarships are available. For more information, contact the Office of Academic Affairs in the College.

Internships

Environmental Soil Science students are required to complete an internship as a degree requirement. Internships provide environmental soil science students with valuable training and experience through industry and the public sector.

Minor in Environmental Soil Science

Contact the department for requirements.

Exercise and Sport Science

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Priscilla Carter
Academic Advisor
pcarter@uga.cc.uga.edu
(706) 542-5050

Department

Exercise and Sport Science
College of Education

Description of the Program

The undergraduate major in Exercise and Sport Science is designed to provide students an in-depth exposure to the scientific basis of physical activity, exercise and sport. Knowledge and skills related to exercise and sport biomechanics, physiology, psychology, epidemiology, physical fitness and conditioning, measurement theory, and other associated areas are obtained through prescribed and elective course work, independent study, and laboratory and field experience. All majors take 60 semester hours of liberal arts education (University Core),

ncluding science, mathematics, social science, and humanities, and 23 semester hours of exercise science courses (EXRS Core), including exercise physiology, scientific principles of conditioning and fitness, biomechanics, exercise and sport psychology, measurement, and exercise epidemiology. An additional 30 semester hours of elective course work and practical experiences are selected based on the students academic interests and career goals. Recommendations for elective course work are available for the following seven program options: Fitness Specialist, Pre-Physical Therapy, Pre-Athletic Training, Pre-Graduate Study in Biomechanics, Pre-Graduate Study in Exercise Physiology, Pre-Graduate Study in Exercise and Sport Psychology, and Pre-Graduate Study in Measurement.

Career Opportunities

The major prepares students for a variety of possible careers in allied health occupations, fitness and sport enterprises, education, sport science and coaching, or business and industry. With a B.S.Ed. degree, positions can be obtained as exercise and sport science specialists in various settings (corporation, hospital, sport medicine clinic, YMCA, community recreation, government, military, sport team). Many graduates go on to graduate or professional schools majoring in sport medicine (physical therapy, athletic training, or other medical specialties) or specialized areas of exercise science (adult fitness and cardiac rehabilitation, exercise physiology, exercise psychology, biomechanics, and measurement). Following advanced study and/or certification, positions may be obtained as physical therapists, athletic trainers, sports medicine physicians, higher-level exercise specialists or directors of cardiac rehabilitation and adult fitness programs in hospital, corporate, YMCA and community settings, and as exercise scientists (teaching and/or research) in higher education, government or industry.

Expectations of Transfer Students

Students transferring to this major must maintain an overall grade point average of 2.75 and satisfactorily complete the following course work: CHEM 1211, 1211L; CHEM 1212, 1212L; MATH 1113; PHYS 1111-1111L; BIOL 1107-1107L; BIOL 1108-1108L.

Special Requirements

Exercise Science core courses must be taken in residence and graded C or above to count for graduation.

Program Requirements

Semester Core Curriculum	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred course in Area C:</i> PHIL 1500	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L, 1108-1108L, and MATH 1113 (take under general electives if not taken in Area D)	
<i>Preferred course in Area E:</i> PSYC 1101 (take under general electives if not taken in Area E)	
Area F:	18
CBIO 2200-2200L, 2210-2210L; CHEM 1211, 1211L; CHEM 1212, 1212L; PHYS 1111-1111L	
<u>Major Requirements:</u>	23
EXRS 2010, 3830, 4300, 4200-4200L, 4400, 4630-4630L, 4640-4640L	
<u>Major Electives:</u>	30
Select 30 hours from the following (upper division: 18 hours; any level: 12 hours): CHEM 2100, 2100L; CSCI 1301-1301L; EXRS 2100, 2130, 3100, 3110, 3450, 3460, 3470, 3480, 4000, 4100, 4110, 4120, 4310, 4320, 4690-4690L, 4800, 5450; HPRB 1190, 4400; PHYS 1112-1112L; PSYC 2980, 2990, 4220, 4230; STAT 4210	
<u>General Electives:</u>	7
Any level	
<i>Total hours required</i>	120

Fees

There is a special \$35 per semester fee for EXRS 3470, Practicum in Athletic Training.

Internships

Internship opportunities in physical therapy, athletic training, adult fitness or cardiac rehabilitation are available with corporations, hospitals, clinics, commercial fitness facilities or community programs in the state of Georgia and nationally.

Fashion Merchandising

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Patricia Hurst
Associate Professor
phunt@fcs.uga.edu
(706) 542-4853

Department

Textiles, Merchandising and Interiors
College of Family and Consumer Sciences

Description of the Program

The curriculum combines business studies with the technical, scientific, and aesthetic factors associated with marketing apparel and textile products. The program emphasizes the skills and competencies needed for careers in retailing, buying, wholesaling, merchandising and promotion. Computer skills are an integral part of the program and an excellent computer center is located in Dawson Hall.

Career Opportunities

Graduating students have exciting employment opportunities as buyers, store managers, fashion directors, entrepreneurs, merchandise managers, sales representatives, and special events coordinators with leading retailers.

Expectations of Transfer Students

Students transferring into the Fashion Merchandising major should have fulfilled the core curriculum requirements, including macro or microeconomics, psychology, sociology, speech, statistics, elementary chemistry, English, literature, and introduction to computing.

Program Requirements

Semester Core Curriculum

Areas A-E:	42
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See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1100

Preferred courses in Area D: CHEM 1110, 1110L and STAT 2000

Preferred course in Area E: PSYC 1101

Area F:	18
ACCT 2101; ARTS 2000; CHFD 2100 or HACE 2100; CSCI 1100-1100L; ECON 2105 or 2106; SOCI 1101	

<u>Major Requirements:</u>	41
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MARK 3000, 4000; TXMI 2000, 3210, 3240, 3500, 3500L, 3520, 3530, 4220, 4230, 4290, 4520, 5240, 5900; choose 3

hours from MARK 4700; TXMI (DRAM) 4270; TXMI 3570, 4530, 4540, 4550, 4580, 5710

<u>Major Electives:</u>	9-10
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Choose 9 to 10 hours from TXMI 5910 or other TXMI courses

<u>General Electives:</u>	9-10
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Any level

<i>Total hours required</i>	120
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Internships

Internships are available on a competitive basis, but not required. They are an important part of many students' programs of study.

Minor in Fashion Merchandising

Contact the department for requirements.

Fisheries and Aquaculture

Degree

Bachelor of Science in Forest Resources (B.S.F.R.)

Contact Person

Bruce C. Bongarten
Associate Dean
bongarte@smokey.forestry.uga.edu
(706) 542-4284

Department

School of Forest Resources

Description of the Program

The Fisheries and Aquaculture major is designed to give undergraduate students a strong background in the biological and managerial aspects of the fisheries profession. Courses in the basic biological and physical sciences provide the background information necessary for specific courses in fisheries. Courses such as fisheries management, limnology, ichthyology, ecology, aquaculture, water quality, and fish physiology provide students with the information needed to appreciate, understand, and manage aquatic systems. Other courses in the Fisheries major include statistics, communication, and policy. These provide the skills to analyze data, communicate effectively, and understand the regulatory aspects of fisheries management. Graduates from this major meet the educational requirements for certification by the American Fisheries Society. Course work in this program provides students with the background necessary for admission to graduate programs in fisheries. There are no designated areas of emphasis in this major.

Career Opportunities

Graduates can find jobs as fisheries technicians or biologists with state and federal agencies. Other

Areas of employment are private firms and aquaculture or hatchery operations.

Entrance Requirements

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Application forms for admission to the Warnell School of Forest Resources are available from the Associate Dean's office. Students may apply for fall or spring semester admission. A maximum of 60 students will be admitted each semester. Applications for fall semester admission are due April 1. Applications for spring semester admission are due September 15. *(Note that these deadlines may be earlier than University of Georgia application deadlines).* To be eligible for admission to the Professional Program, students must have completed the 60 hour pre-Professional curriculum, except that up to 8 credits of electives and/or SPCM 1100) may be deferred if an equal number of credits have been completed from the following courses: ECOL(FORS) 3260-3260L Wildlife and Fisheries and Aquaculture majors only), FORS 3010-3010L, FORS 3020-3020L, and CRSS(FORS) 3060-3060L. For information on the admissions process, see the Warnell School of Forest Resources section of this Bulletin.

Expectations of Transfer Students

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Admission to the major is not granted until the 60 credit pre-Professional Program is completed. Transfer students should contact the Associate Dean, Warnell School of Forest Resources, for information on pre-Professional Program requirements and confirmation of transfer credit.

Special Requirements

The Fisheries and Aquaculture major requires 124 semester credits: 64 in the Professional Program and 60 in the pre-Professional Program.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours
42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under major electives if not taken in Area D)

Preferred course in Area E: ECON 2106 (take under major electives if not taken in Area E)

Area F:

BIOL 1108-1108L; CHEM 1212, 1212L, 2211, 2211L; SPCM 1100; STAT 2000

Major Requirements:

CRSS(FORS) 3060-3060L; ECOL (FORS) 3260-3260L, 4310-4310L; ECOL 4050-4050L, 4070-4070L; ENGL 3590; FORS 3000-3000L; FORS 3020-3020L or ECOL (BIOL) 3500-3500L; FORS 3300, 3610-3610L, 3710-3710D, 4730 or 4750, 4800-4800D, 5360-5360L, 5380-5380L; PGEN 3580-3580L

Major Electives:

Total hours required

18

55

9

124

Fees

Tuition in the Professional Program is approximately 10% greater than for non-Professional programs.

Scholarships

In addition to the financial assistance offered through the University's Office of Student Financial Aid, a number of scholarships and awards are available specifically for undergraduate students in forest resources. These awards total about \$80,000 annually, and are made possible by donations from forest-related industries and organizations, and from alumni and other interested individuals.

Selection for these scholarships is based on academic achievement, leadership ability, and financial need. Application forms may be obtained from the Office of the Associate Dean.

Internships

An active internship program gives students opportunity to supplement their classroom studies with practical experience in forest resource management. Students may work with private companies, landowners, conservation organizations, and federal and state agencies.

Cooperative Education

The school also offers a Cooperative Education Program with federal and state agencies such as the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Georgia Department of Natural Resources. Students may alternate semesters of off-campus work with semesters of on-campus study. Although we make every effort to facilitate cooperative education, the arrangement for such programs is usually left to student initiative.

Food Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Robert Shewfelt
Professor and Undergraduate Coordinator
shewfelt@uga.cc.uga.edu
(706)542-5136

Department

Food Science and Technology
College of Agricultural and Environmental Sciences

Description of the Program

Food Science combines a knowledge of science, technology, and engineering to solve problems of food production, processing, packaging, distribution, preparation, evaluation, and use. Therefore, instruction in the food science major emphasizes the principles of biology, chemistry, engineering, and other sciences as they relate to foods and the conversion of raw materials into processed foods. During the first two years, students take courses in chemistry, biochemistry, microbiology, physics, mathematics, and statistics. During the junior and senior years, food science majors take required course work in addition to approved electives to allow specialization in preparing for careers. Science electives are ideal for students who wish to enter graduate or professional programs, such as veterinary medicine. Advanced degrees provide additional opportunities for career development in industry, teaching, and government. Technology electives offer more practical training in production and allows graduates with experience to move into managerial or supervisory positions in many aspects of food industry. Food Engineering electives are best for students who want the skills required to work in food process engineering or development. Graduates who combine their technical knowledge and skills with business find excellent opportunities in technical sales, consulting, or management in the food industry.

Career Opportunities

Students completing the food science major have received excellent training and experience appropriate for employment in the world's largest and most diverse industry. Food scientists develop new foods and new ways to use them, such as converting inexpensive soybeans, fish meal, or single-cell proteins into nutritious and tasty foods. They also check the safety of ingredients and food processing methods. By applying their knowledge of chemistry, microbiology, engineering, and other sciences, they test foods for flavor, color, texture, and nutrition. Career opportunities are available in industry, education, and government agencies.

Food science graduates are involved in research and development work, processing, packaging, quality control, marketing, consulting, teaching, writing or enforcing government regulations, and jobs dealing with foreign trade.

Expectations of Transfer Students

Courses recommended for transfer students include calculus, statistics, general chemistry, organic chemistry, biology and physics.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred course in Area C:</i> SPCM 1100 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under general electives if not taken in Area D)	
Area F:	18
BIOL 1108-1108L; CHEM 1212, 1212L, 2100, 2100L; PHYS 1111-1111L; STAT 2000	
<u>Major Requirements:</u>	26
BCMB(BIOL)(CHEM) 3100; FDST 3000, 4000, 4010, 4020, 4040-4040L, 4090-4090L, 4250-4250L; FDST (MIBO) 4030-4030L; MIBO 3500	
<u>Major Electives:</u>	20
Select Option I or II:	
<i>Option I: Science, Technology, and Engineering</i>	
FDST 4050-4050L, 4060-4060L, 4070, 4080-4080L, 4110-4110L	
<i>Option II: Business</i>	
AAEC 2580 or ECON 2106; AAEC 3100; AAEC 3980 or MGMT 3000; ACCT 2101 or 1160 or AAEC 2110; FDST 4100	
Choose 6 hours from ADSC(FDST) 3650-3650L; FDST 3910, 4060-4060L, 4130, 4800; FDST (ADSC) 4140-4140L; FDST (EHSC) (MIBO) 4310-4310L, 4320-4320L; FDST(MIBO) 4120-4120L; POUL (FDST) 3860	
<u>General Electives:</u>	14
Any level	
<i>Total hours required</i>	120

Scholarships

Food science majors may be eligible for scholarships provided by the Food Science Scholarship Fund, which is made up of contributions from food

industries and alumni. Scholarships are also available from the Institute of Food Technologists, the College of Agricultural and Environmental Sciences and the University of Georgia. For more information about college-wide scholarships, contact the Office of Academic Affairs.

Internships

Internships with food companies are available and encouraged to provide a well-rounded education.

Minor in Food Science

Contact the department for requirements.

Foreign Language Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Carol Spurgeon
Undergraduate Advisor
(706) 542-4522

Department

Language Education
College of Education

Description of the Program

This program prepares a student for a professional four-year certificate in Georgia for teaching French, German, Latin, or Spanish in grades P-12. Requirements and prerequisites in the teaching field should be considered in choosing courses in the freshman and sophomore years. All prospective teachers should plan their program with their advisor. To enter the Professional Teacher Education (TE) course sequence, students must have an overall GPA of 2.6. In addition, a 2.6 GPA must be maintained in all upper-level teaching field courses, both required and elective.

If there are more applicants for the Professional Teacher Education courses than can be accommodated, admission will be determined by the date the applicant declared Foreign Language Education as his or her major. Students who are delayed because of their late date of declaration will have priority for spaces the next time courses are offered.

Career Opportunities

This program prepares students to teach French, German, Latin, or Spanish in grades P-12 in the public schools of Georgia.

Entrance Requirements

A 2.60 overall GPA is required for entry to this major.

Special Requirements

Students in this major must maintain a 2.6 overall GPA, maintain a 2.6 teaching field GPA, and complete 6 of 9 teaching field courses before entering TE courses.

Program Requirements

<u>Semester</u>	<u>Core Curriculum</u>	<u>Hours</u>
Areas A-E:		42
See Core Curriculum		
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101		
Area F:		18
EFND 2030; EPSY 2020; SPCM 1100, 1500, or 1800; SPED 2000; six hours of electives (for Latin certification, take LATN 2001 and 2002 in place of electives)		
<u>Major Requirements:</u>		21
ELAN 4080, 4530, 4531, 5040, 5560		
<u>Major Electives:</u>		27-30
Choose 27-30 hours of electives depending on teaching field:		
<i>French</i> (30 hours)		
Ten FREN courses above 2000 level		
<i>German</i> (30 hours)		
Ten GRMN courses above 2000 level		
<i>Latin</i> (27 hours)		
LATN 3010; 5 LATN courses above 4000 level; 9 hours of CLAS, GREK, and/or LATN courses		
<i>Spanish</i> (30 hours)		
Ten SPAN courses above 2000 level		
<u>General Electives:</u>		9-12
Any level		
<i>Total hours required</i>		120

Forest Environmental Resources

Degree

Bachelor of Science in Forest Resources (B.S.F.R.)

Contact Person

Bruce C. Bongarten
Associate Dean
bongarte@smokey.forestry.uga.edu
(706) 542-4284

Department

School of Forest Resources

Description of the Program

This major is designed to prepare students for professional practice in the environmental sciences or for graduate education. Course work may be tailored to individual interests, and may include environmental assessment, wetlands delineation and remediation, forest hydrology and soil

science, environmental systems, and land application of wastes. Students in this major must elect to follow one of three designated Areas of Emphasis: 1) Soils and Water Resources, 2) Hydrology and Environmental Systems, 3) Environmental Resource Assessment.

Career Opportunities

Graduates are prepared for careers in industry, government agencies, and consulting firms.

Entrance Requirements

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Application forms for admission to the Warnell School of Forest Resources are available from the Associate Dean's office. Students may apply for fall or spring semester admission. A maximum of 60 students will be admitted each semester. Applications for fall semester admission are due April 1. Applications for spring semester admission are due September 15. *(Note that these deadlines may be earlier than University of Georgia application deadlines).* To be eligible for admission to the Professional Program, students must have completed the 60 hour pre-Professional curriculum, except that up to 8 credits of electives (and/or SPCM 1100) may be deferred if an equal number of credits have been completed from the following courses: ECOL(FORS) 3260-3260L (Wildlife and Fisheries and Aquaculture majors only), FORS 3010-3010L, 3020-3020L, and CRSS(FORS) 3060-3060L. For information on the admissions process, see the Warnell School of Forest Resources section of this Bulletin.

Expectations of Transfer Students

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Admission to the major is not granted until the 60 credit pre-Professional Program is completed. Transfer students should contact the Associate Dean, Warnell School of Forest Resources, for information on pre-Professional Program requirements and confirmation of transfer credit.

Special Requirements

The Forest Environmental Resources major requires 122-124 semester credits: 62-64 in the Professional Program and 60 in the pre-Professional Program.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under major electives if not taken in Area D)

Preferred course in Area E: ECON 2106 (take under major electives if not taken in Area E)

Area F:

BIOL 1108-1108L; CHEM 1212, 1212L; CHEM 2211, 2211L or PHYS 1111-1111L; SPCM 1100; STAT 2000

Major Requirements:

CRSS(FORS) 3060-3060L; FORS 3000-3000L; FORS 3010-3010L or BTNY 4650-4650L; FORS 3020-3020L or ECOL(BIOL) 3500-3500L; FORS 3300, 3610-3610L, 3710-3710D, 3910-3910L, 4010-4010L, 4160-4160L, 4730 or 4750, 4800-4800D

Choose one of the following Areas of Emphasis:

Soil and Water

CRSS 4540-4540L, 4600-4600L; FORS 4000-4000L, 4110, 4120, 4310-4310L

Hydrology and Environmental Systems

CRSS 4600-4600L; FORS 4110, 4120, 4150; MATH 2210, 2210L; MATH 2700 or GEOL 4220

Environmental Resource Assessment

FORS 3580-3580L, 4310-4310L, 5300-5300L, 5820

Three hours of electives

Major Electives:

Total hours required

Fees

Tuition in the Professional Program is approximately 10% greater than for non-Professional programs.

Scholarships

In addition to the financial assistance offered through the University's Office of Student Financial Aid, a number of scholarships and awards are available specifically for undergraduate students in forest resources. These awards total about \$80,000 annually, and are made possible by donations from forest-related industries and organizations, and from alumni and other interested individuals.

Selection for these scholarships is based on academic achievement, leadership ability, and financial need. Application forms may be obtained from the Office of the Associate Dean.

Internships and Cooperative Education

An active internship program gives students opportunity to supplement their classroom studies

with practical experience in forest resource management. Students may work with private companies, landowners, conservation organizations, and federal and state agencies.

The school also offers a Cooperative Education Program with federal and state agencies such as the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Georgia Department of Natural Resources. Students may alternate semesters of off-campus work with semesters of on-campus study. Although we make every effort to facilitate cooperative education, the arrangement for such programs is usually left to student initiative.

Forestry

Degree

Bachelor of Science in Forest Resources (B.S.F.R.)

Contact Person

Bruce C. Bongarten

Associate Dean

bongarte@smokey.forestry.uga.edu

(706) 542-4284

Department

School of Forest Resources

Description of the Program

The Forestry major emphasizes the biological, social, and management aspects of forestry. A student in the Forestry major will learn the scientific principles governing tree growth in various ecosystems and will develop the management skills necessary to sustain forests in good health to meet society's consumptive and non-consumptive needs from the forest. The graduate from this major will be a professional forester responsible for the resolution of competing uses of the forest and forest resources, and for the management of healthy, productive forests in meeting the owner's objectives. Long range planning for the management of forests and forest land is emphasized. Students may use electives to fulfill any of seven Areas of Emphasis, including: Forest Management, Forest Business, Forest Biology, Forest Recreation, Forest Policy and Administration, Urban Forestry, and Wood Utilization.

Career Opportunities

Forestry focuses on the management and use of forest land to produce wood and wood fiber to satisfy the demands of society. Students study how forests grow and develop, and learn how to manage, to regenerate and harvest this renewable resource. Graduates pursue careers as industrial foresters, as forestry consultants and as foresters with government agencies.

Entrance Requirements

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Application forms for admission to the Warnell School of Forest Resources are available from the Associate Dean's office. Students may apply for fall or spring semester admission. A maximum of 60 students will be admitted each semester. Applications for fall semester admission are due April 1. Applications for spring semester admission are due September 15. (*Note that these deadlines may be earlier than University of Georgia application deadlines*). To be eligible for admission to the Professional Program, students must have completed the 60 hour pre-Professional curriculum, except that up to 8 credits of electives (and/or SPCM 1100) may be deferred if an equal number of credits have been completed from the following courses: ECOL(FORS) 3260-3260L (Wildlife and Fisheries and Aquaculture majors only), FORS 3010-3010L, FORS 3020-3020L, and CRSS(FORS) 3060-3060L. For information on the admissions process, see the Warnell School of Forest Resources section of this Bulletin.

Expectations of Transfer Students

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Admission to the major is not granted until the 60 credit pre-Professional Program is completed. Transfer students should contact the Associate Dean, Warnell School of Forest Resources for information on pre-Professional Program requirements and confirmation of transfer credit.

Special Requirements

The Forestry major requires 125 semester credits: 65 in the Professional Program and 60 in the pre-Professional Program.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> BIOL 1103, 1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under major electives if not taken in Area D)	
<i>Preferred course in Area E:</i> ECON 2106 (take under major electives if not taken in Area E)	

Area F:	18
BIOL 1108-1108L; CHEM 1212, 1212L; SPCM 1100; STAT 2000; three hours of elective	
Major Requirements:	53
CRSS(FORS) 3060-3060L; FORS 3000- 3000L, 3010-3010L, 3020-3020L, 3040, 3300, 3500, 3610-3610L, 3710-3710D, 3910-3910L, 4010-4010L, 4610-4610L, 4620, 4710-4710L, 4730 or 4750, 4800- 4800D, 5720-5720L	

Major Electives:	12
<i>Total hours required</i>	125

Fees

Tuition in the Professional Program is approximately 10% greater than for non-Professional programs.

Scholarships

In addition to the financial assistance offered through the University's Office of Student Financial Aid, a number of scholarships and awards are available specifically for undergraduate students in forest resources. These awards total about \$80,000 annually, and are made possible by donations from forest-related industries and organizations, and from alumni and other interested individuals.

Selection for these scholarships is based on academic achievement, leadership ability, and financial need. Application forms may be obtained from the Office of the Associate Dean.

Internships and Cooperative Education

An active internship program gives students opportunity to supplement their classroom studies with practical experience in forest resource management. Students may work with private companies, landowners, conservation organizations, and federal and state agencies.

The school also offers a Cooperative Education Program with federal and state agencies such as the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Georgia Department of Natural Resources. Students may alternate semesters of off-campus work with semesters of on-campus study. Although we make every effort to facilitate cooperative education, the arrangement for such programs is usually left to student initiative.

French

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Doris Kadish
(706) 542-1075

Department

Romance Languages
College of Arts and Sciences

Description of the Program

Students majoring in French will take courses that combine the study of literature, language, culture, and linguistics, which will lead to a development of language proficiency and an understanding of the French-speaking world.

Career Opportunities

Many students majoring in French will become teachers or go on to graduate school, but proficiency in a foreign language also helps majors find employment in the public and private sectors.

Entrance Requirements

A student continuing a language taken in high school must take either the language achievement test of the College Entrance Examination Board or the placement test administered by the University of Georgia Counseling and Testing Center. Students will be placed in the appropriate course on the basis of their scores and other pertinent information. The Advanced Placement examinations in French Language and Literature may also be submitted for placement and possible credit.

Expectations of Transfer Students

Four courses or 14 semester hours of beginning and intermediate French language course work, equivalent to UGA FREN 1001-2002, are required. Study abroad courses can be used to fulfill part or all of these prerequisites, upon permission of advisors in the department.

Special Requirements

A minimum grade of C is required in course work for this major.

No student may receive credit for any course which is a prerequisite to a course for which college credit has already been received. Exceptions may be made only by the head of the department.

Certain courses in the Department of Romance Languages are not open to native speakers of that language. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was French, Italian, Portuguese, or Spanish.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
FREN 2001, 2002, LING 2100	
Choose nine hours from the following:	
ARHI 2100; CLAS 1000, 1010, 1020; CMLT 2210, 2220; DRAM 2000, 2120; ENGL 2310, 2320, 2400; FREN 1001, 1002; GEOG (ANTH) (CMLT) (HIST) (SOCI) 2100; HIST 2301, 2302, 2502; ITAL 2500, 2600; MUSI 2020; PHIL 1000; PORT 2600; RELI 1001, 1002, 1003; ROML 2550; SPAN 2550; WMST 1110, 2010; 1000/2000-level courses in another language; 1000/2000-level foreign language study abroad courses	
<u>Major Requirements:</u>	27
FREN 3010, 3030, 4010, 4050, 4060, 4070, FREN(LING) 3090	
Choose two courses from FREN 4080, 4120, 4150; FREN(LING) 4630	
<u>Major Electives:</u>	3
Choose one course from HIST 3381, 3382	
<u>General Electives:</u>	30
(Refer to College-wide requirements when selecting general electives.)	
Upper division (9 hours)	
Any level (21 hours)	
<i>Total hours required</i>	120

Study Abroad

The Department of Romance Languages encourages all students to participate in an accredited study abroad program for an academic year, a semester, or the summer. Prior departmental approval is required for credit. Contact the Office of International Education (542-1557) for information about programs. Check with the department for the maximum number of hours that will count for a major or minor.

Minor in French

Contact the department for requirements.

Furnishings and Interiors

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Ms. Linda Tepfenhart
Lecturer
ltepfenhart@fcs.uga.edu
(706)542-4914

Department

Textiles, Merchandising and Interiors
College of Family and Consumer Sciences

Description of the Program

The Furnishings and Interiors curriculum combines drafting classes with historic studies to explore rendering, color, perspective, architecture, interiors, furniture and decorative arts. The program emphasizes the skills and competencies needed for careers in furnishings and interiors. Computer skills are focused on the curriculum. An excellent computer center in the College is readily accessible to students.

Career Opportunities

Exciting employment opportunities are available in architectural/design firms, as sales representatives for textiles, furniture, and lighting; kitchen and bath designers; and designers of historic reproductions.

Expectations of Transfer Students

Students transferring into the Furnishings and Interiors major should have fulfilled the core curriculum requirements, including psychology, statistics, elementary chemistry, English, literature, speech, math, and social sciences.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> EDES 2510 or 2520	
<i>Preferred courses in Area D:</i> CHEM 1110, 1110L and STAT 2000	
<i>Preferred courses in Area E:</i> PSYC 1101	
Area F:	18
ARST 1050, 1070; ARTS 2000; CHFD 2100 or HACE 2100; CSCI 1100-1100L; SPCM 1100	
<u>Major Requirements:</u>	49
TXMI 3350, 3360, 3380, 3500, 3500L, 3520, 3570, 4350, 4360, 4370, 4380, 5310, 5320, 5330, 5910 (9 hours)	

<u>Major Electives:</u>	9
Choose three TXMI courses	
<u>General Electives:</u>	2
Any level	
<i>Total hours required</i>	120

Internships

Internships are available on a competitive basis, but not required. They are an important part of many students' programs of study.

General Business

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Dr. Elizabeth Barth

Director, Undergraduate Program

bbarth@uga.cc.uga.edu

(706)542-8352

Department

Terry College of Business

Description of the Program

Students entering the Terry College of Business may choose this program during their freshman and sophomore years, later selecting a major field of study after exposure to several business areas. Individuals who retain General Business as a major are allowed flexibility in choosing major course work. As part of the curriculum, students are required to take ACCT 5000 to graduate.

Entrance Requirements

Students accepted to General Business must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, 2102L, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

Semester Core Curriculum

Areas A-E:

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)

Area F:

ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090

Major Requirements:

ACCT 5000, 5010; FINA 3000; MARK 3000; MGMT 3000; MSIT 3000;

Choose five courses from the following (no more than two from any prefix): ECON 4010, 4020; FINA 4200, 4310; LEGL 4300, 4400; MARK 4000, 4100; MGMT 5440, 5500, 5700; REAL 4000; REAL (FINA) 5100; RMIN 4000, 5100

Major Electives:

Choose one of the following: ACCT 4000; ECON 4000; FINA 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000

General Electives:

(Refer to College-wide requirements when selecting general electives.)

Five courses in Arts and Sciences

One business course outside major

Two courses outside department

Total hours required

Hours

42

18

33

3

24

120

Genetics

Degree

Bachelor of Science (B.S.)

Contact Person

John McDonald

McDonald@bscr.uga.edu

Department

Genetics

College of Arts and Sciences

Description of the Program

The Genetics Department was formed in 1980 and currently consists of 20 faculty members reflecting a diverse yet complementary range of research interests. The undergraduate major in genetics was established in 1983 and started out with only 20 students. As of fall 1997, there were 120 genetics majors. In addition to taking a challenging

series of required courses, genetics majors are encouraged to participate in research projects conducted in individual faculty members' laboratories. The average GPA of graduating genetics majors since inception of the program is 3.40.

For more information about the Genetics Department and the major in genetics, consult the Department's web site at <http://www.genetics.uga.edu>.

Career Opportunities

The genetics major provides a strong base for biological science-oriented careers. Ninety percent of genetics graduates go on to pursue advanced degrees in research and/or medicine.

Entrance Requirements

Any student in good standing in the College of Arts and Sciences is eligible to enter the major.

Expectations of Transfer Students

Students should complete undergraduate biology, inorganic and organic chemistry, and biochemistry in preparation for transferring to the genetics major.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
Area F:	18
CHEM 1411, 1411L (or 1210, 1210L), CHEM 1412, 1412L (or 1220, 1220L), CHEM 2211, 2211L, CHEM 2212, 2212L	
<u>Major Requirements:</u>	32
BCMB (BIOL) (CHEM) 3100; CBIO (BIOL) 3400; GENE 3214, 4204, 4214L, 4224, 4954; GENE(BIOL) 3204, 4604; PHYS 1211-1211L, 1212-1212L	
<u>Major Electives:</u>	12-14
Choose four courses from CSCI 1301-1301L; STAT 2210; MATH 2500; BCMB 4010, 4020; CBIO(BIOL) 3300; MIBO 3500	
<u>General Electives:</u>	14-16
(Refer to College-wide requirements when selecting general electives.)	
Upper division (0-4 hours)	
Any level (10-12 hours)	
Total hours required	120

Scholarships, Internships

Research assistant positions are occasionally available for undergraduates in the laboratories of genetics faculty members. The Genetics Department sponsors a "Summer Undergraduate Fellow-

ships in Genetics (SUNFIG)" program. Underrepresented minority students are especially encouraged to apply.

Minor in Genetics

Contact the department for requirements.

Geography

Degrees

Bachelor of Science (B.S.), Bachelor of Arts (A.B.)

Contact person

Andrew J. Herod
Undergraduate advisor
aherod@arches.uga.edu
(706) 542-2366

Department

Department of Geography
College of Arts and Sciences

Description of the Program

The major in geography requires at least 24 hours of geography courses at the 3000-4000 level and must include GEOG 3510-3510L. A minimum grade of C must be earned in each course. For the A.B. degree, 3000-4000-level course work in the major must include 6 hours of human geography courses, 3 hours of physical geography courses, and 12 additional elective hours in geography; at least 6 hours must comprise 4000-level courses in human geography or techniques. For the B.S. degree, 3000-4000-level course work in the major must include 6 hours of physical geography courses, 3 hours of human geography courses, and 12 additional elective hours in geography; at least 6 hours must be 4000-level courses in physical geography or techniques.

Career Opportunities

The breadth of geography as a discipline together with the flexibility of the undergraduate program allows students to tailor their coursework to suit the needs of a wide range of employers in business, government, and education. Opportunities in the technical fields of geographic information systems and mapping sciences continue to grow rapidly (see details of the interdisciplinary undergraduate certificate program in Geographic Information Sciences). Opportunities remain strong in location analysis, regional development, urban planning, environmental assessment, and atmospheric and earth sciences. For more details, contact the Undergraduate Advisor.

Expectations of Transfer Students

Transfer students intending to enter the geography major should complete Areas A-F of the core curriculum. Preferred courses in Areas D and E

are listed under Program Requirements (A.B. and B.S.), as are Area F requirements specific to each degree.

Geography/Location Analysis

In cooperation with the Department of Geography in the College of Arts and Sciences, the Terry College of Business offers a major in Location Analysis, which trains students in the fundamentals of economics, geography, and allied fields. It provides the background necessary for careers in location decision-making in the private and public sectors, such as with city, county, metropolitan, and regional planning commissions; private planning and real property development firms; industries concerned with urban, industrial, and retail development problems; transportation planning; and market analysis consultants. This curriculum also provides a superior basis for graduate work in area planning or economic geography. See Location Analysis.

Program Requirements (A.B.)

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area D: GEOG 1111, 1111L (take under general electives if not taken in Area D)

Preferred course in Area E: GEOG 1101-1101D (take under general electives if not taken in Area E)

Area F:	18
GEOG 2300; foreign language (3rd semester)	

Choose four courses from the following: Any two 1000/2000-level GEOG courses not taken in Area E; any 2000-level SOCI class; 4th semester foreign language; a second 1000/2000-level HIST course (beyond the one course taken in Area E); any course from the following: AFAM 2000; ECON 2105, 2106; PHIL 1500; SOCI 1600; WMST 2010

(If GEOG 2300 and a foreign language through the third semester have already been satisfied, students may make up their 18 hours with other courses from the above list.)

<u>Major Requirements:</u>	24-26
GEOG 3510-3510L; choose two courses from Group A below; choose one course from Group B below; choose four courses from the three groups below (at least two of the seven courses must be 4000-level	

courses from Group A and/or C)
Group A: Human/Regional Geography
GEOG 3620, 3630, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4710, 4720, 4730, 4740

Group B: Physical Geography
GEOG 3010, 3110, 3210, 4020, 4030, 4040, 4060, 4120, 4140, 4160, 4240, 4810; GEOG(BTNY) 4220, 4240

Group C: Geographic Techniques
GEOG 3990, 4300, 4310, 4330, 4350, 4370, 4410, 4430, 4470, 4920, 4970H, 4980H, 4990H

<u>General Electives:</u>	34-36
(Refer to College-wide requirements when selecting general electives.)	
Upper Division (19-30 hours)	
Any level (4-17 hours)	

<i>Total hours required</i>	120
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Program Requirements (B.S.)

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: GEOG 1111, 1111L (take under general electives if not taken in Area D)

Preferred course in Area E: GEOG 1101-1101D (take under general electives if not taken in Area E)

Area F:	18
CSCI 1100-1100L or CSCI 1301-1301L; GEOG 2300 or STAT 2000; MATH 2200, 2200L or 2210, 2210L; two lab science courses beyond those required under Area D in BIOL, CHEM, GEOG, GEOL, or PHYS (both courses can be from the same department)	

(If the above requirements have been satisfied, students may make up their 18 hours with other major-related courses in ANTH (physical), BIOL, CHEM, CSCI, ECOL, GEOG, GEOL, MATH, PHYS, or STAT.)

<u>Major Requirements:</u>	24-26
GEOG 3510-3510L; choose two courses from Group B below; choose one course from Group A below; choose four courses from the three groups below (at least two of the seven courses must be 4000-level courses from Group B and/or C)	

Group A: Human/Regional Geography
GEOG 3620, 3630, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4710, 4720, 4730, 4740,

Group B: Physical Geography
GEOG 3010, 3110, 3210, 4020, 4030, 4040, 4060, 4120, 4140, 4160, 4240, 4810; GEOG(BTNY) 4220, 4240

Group C: Geographic Techniques

GEOG 3990, 4300, 4310, 4330, 4350, 4370,
4410, 4430, 4470, 4920, 4970H, 4980H,
4990H

General Electives: 34-36

(Refer to College-wide requirements when
selecting general electives.)

Upper division (19-30 hours)

Any level (4-17 hours)

Total hours required 120

Minor in Geography

Contact the department for requirements.

Geology

Degrees

Bachelor of Science (B.S.), Bachelor of Arts (B.A.)

Contact

Raymond P. Freeman-Lynde

Undergraduate Coordinator

rffreeman@gly.uga.edu

(706) 542-2391

Department

Geology

College of Arts and Sciences

Description of the Program

The undergraduate curriculum prepares students for careers in the geosciences. Course work can be selected to emphasize a variety of geoscience specialties including geophysics, geoarchaeology, sedimentary geology, paleobiology, geochemistry, geohydrology, and environmental geology.

The Department of Geology offers a newly designed curriculum that provides the undergraduate student with flexibility while still covering the basic geoscience curriculum. A required four-course sequence covers the basic concepts of earth materials, surface and internal earth processes, and the life and sedimentary environments of the earth's past. The field experience is a strong part of the undergraduate geology curriculum. All the required classes take field trips. Two courses, Field Methods and Geology Field School (taught in the summer in the Rocky Mountains of Colorado) emphasize the collection and interpretation of geologic information in the field. Electives on a variety of topics allow the student to specialize in fields of interest.

The typical undergraduate geology major continues on in a graduate program (the professional degree in geology is the masters degree). However, some undergraduates do find employment in the geosciences upon graduation. Career possibilities include work in petroleum and mineral exploration, environmental remediation, education, and various governmental agencies.

Career Opportunities

Over half of the geology undergraduates go on to do graduate study in geology. Some of these students stay at Georgia, but many go to other graduate programs. Most of the employment opportunities in the geosciences require a graduate degree. The Masters degree is considered the professional degree, the degree most often held by professional geologists. However, some entry-level jobs do exist for geoscientists with undergraduate degrees, especially if they have some prior work experience.

The employment outlook in the geosciences, as in any profession, varies with the economic climate of the country. The long-range outlook is good at this time. Dwindling energy, mineral and water resources, increasing environmental concerns, global issues such as rising sea levels, and hazard assessment present new challenges to geoscientists. Career opportunities are increasing in environmental science and hydrogeology with the growing need to maintain Earth's natural environments and meet society's demands for Earth materials.

According to the American Geological Institute's *Geoscientific Employment and Hiring Survey — 1991*, about 85,000 geoscientists work in the United States. Most earth scientists are employed by industries related to oil and gas, mining and minerals and water resources.

Many geoscientists are self-employed as geological consultants or work with consulting firms. Most consulting geologists have had extensive professional experience in industry, teaching or research.

Also, many geoscientists work for the federal or state government. Most work for the U.S. Geological Survey (Department of Interior), but others work for the Department of Energy, Forest Service, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, U.S. Army Corps of Engineers, or a state geological survey.

Salary scales vary depending on the career path, location, qualifications of the geoscientist and, of course, the economy. In the early 1990s, the range of average starting salaries for graduates with bachelor's degrees was \$21,000 to \$36,000. Starting salaries for master's degrees ranged from \$24,000 to \$38,500 and from \$30,000 to \$44,000 for Ph.D.'s.

Recent graduates from the Department of Geology at UGA have followed the trends outlined above. Most have been hired by consulting firms doing work on environmental problems. Some of the students have been hired in the more traditional fields of mineral and petroleum exploration. A few

graduates have gone into teaching at both the high school and university level while others have gone on to work for Government organizations.

Program Requirements (A.B. and B.S.)

Semester Core Curriculum (A.B.) **Hours**
Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1103-1103L, CSCI 1301-1301L, and one of the following lab science courses (the other three in Area F): CHEM 1211, 1211L, 1212, 1212L; GEOL 1250-1250L or 1121, 1121L; or GEOL 1260-1260L or 1122, 1122L (take under general electives if not taken in Area D).

Preferred course in Area E: ANTH 1102
Area F: 18

Choose three of the following lab science courses not taken in Area D: CHEM 1211, 1211L, 1212, 1212L; GEOL 1250-1250L or 1121, 1121L; GEOL 1260-1260L or 1122, 1122L

Choose six hours from the following:
MATH 2200, 2200L; PHYS 1010;
CSCI 1301-1301L

Semester Core Curriculum (B.S.) **Hours**
Area A-E: 42

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: MATH 2200, 2200L and two of the following lab science courses: CHEM 1211, 1211L, 1212, 1212L; GEOL 1250-1250L or 1121, 1121L; GEOL 1260-1260L or 1122, 1122L (take under general electives if not taken in Area D).

Preferred course in Area E: ANTH 1102
Area F: 18

Choose three of the following lab science courses not taken in Area D: CHEM 1211, 1211L, 1212, 1212L; GEOL 1250-1250L, 1260-1260L (GEOL 1121, 1121L and 1122, 1122L will be accepted to satisfy degree requirement)

Choose one from the following: Organic Chemistry; PHYS 1111-1111L

Major Requirements (A.B. and B.S.): 30
GEOL 3010-3010L, 3020-3020L, 4010-4010L, 4020-4020L, 4250, 4270

Choose nine hours from the following:
GEOL 3300, 4050, 4060, 4090, 4110, 4220, 4300, 4310, 4330, 4500, 4600, GEOL(ANTH)4700

Major Electives: 4
MATH 2210, 2210L
General Electives: 26
(Refer to College-wide requirements when selecting general electives.)
Upper division (9 hours)
Any level (17 hours)
Total hours required 120

Minor in Geology
Contact the department for requirements.

German

Degree
Bachelor of Arts (A.B.)

Contact Person
Dr. Paul Popov
ppopov@uga.cc.uga.edu
(706)542-2442

Department
Germanic and Slavic Languages
College of Arts and Sciences

Description of the Program

The undergraduate major in German is designed to provide students with communicative proficiency in the German language and knowledge of important aspects of German culture. Students are strongly encouraged to take courses from the survey sequence during the junior year and to enroll in German 4010.

Entrance Requirements
GRMN 2002 is a prerequisite for upper-division courses.

Expectations of Transfer Students
Students transferring as juniors should have completed four semesters of German study equivalent to UGA courses GRMN 1001-2002.

Special Requirements
Students must earn a minimum grade of C in each course. With permission of the department, up to 6 semester hours of upper-division transfer credit from the UGA-affiliated Studies Abroad Program (Erlangen-Nürnberg or Rostock) may be applied towards fulfillment of the major requirements, provided that credit for GRMN 2002 was earned before participation in the program. Otherwise, all courses fulfilling the major requirements must be taken in residence.

Program Requirements **Hours**
Semester Core Curriculum 42
Areas A-E:
See Core Curriculum
Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18
 GRMN 2001, 2002; LING 2100

Nine additional hours preferably taken in the following: an additional foreign language, world literature, art, music, theater, philosophy, geography, world history, economics, international studies, women's studies, linguistics, communications, and anthropology

Major Requirements: 21
 GRMN 3010, 3020, 4520, 3250 or 3260, GERM(LING) 3380 or 4460

Six additional hours of GRMN courses at the 3000-4000 level (excluding GRMN 3500)

General Electives: 39
 (Refer to College-wide requirements when selecting general electives.)

Upper division (18 hours)
 Any level (21 hours)

(It is recommended that students complement course work in the major with courses in German/European History, Philosophy, Literature, Linguistics, Art or Music History, Government, Economics, or other related subjects.)

Total hours required 120

Minor in German
 Contact the department for requirements.

Germanic and Slavic Languages

Degree
 Bachelor of Arts (A.B.)

Contact Person
 Dr. Paul Popov
 ppopov@uga.cc.uga.edu
 (706) 542-2442

Department
 Germanic and Slavic Languages
 College of Arts and Sciences

Description of the Program
 The undergraduate major in Germanic and Slavic Languages is designed to provide students with a good communicative knowledge of both the German and the Russian language and a basic insight into the culture of Germany and Russia.

Entrance Requirements
 GRMN 2002 and RUSS 2002 are prerequisites for upper-division courses.

Special Requirements
 Students must earn a minimum grade of C in each course. Upper-division transfer credit from UGA-

affiliated Studies Abroad Programs must be pre-approved by the department.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
GRMN 2001, 2002; RUSS 2001, 2002; LING 2100	
Three hours from the following: beginning/intermediate courses in a second foreign language, art, music, theater, literature, history, geography, anthropology, economics, international studies, linguistics, philosophy, communications, and political science	
Major Requirements:	24
GRMN 3010, 3020; RUSS 3001, 3002	
Six additional hours of GRMN courses at the 3000/4000 level (excluding GRMN 3500)	
Six additional hours of RUSS courses at the 3000/4000 level	
General Electives:	36
(Refer to College-wide requirements when selecting general electives.)	
Upper division (15 hours)	
Any level (11 hours)	
Total hours required	120

Greek

Degree
 Bachelor of Arts (A.B.)

Contact Person
 Dr. Sarah Spence
 Undergraduate Coordinator
 sspence@uga.cc.uga.edu
 (706) 542-0417

Department
 Classics
 College of Arts and Sciences

Description of the Program
 This program provides students with an opportunity to pursue studies in Greek literature, history, archaeology, art, philosophy, and religion while concentrating on the Greek language.

Career Opportunities
 Career opportunities for graduates include teaching at the secondary level, non-teaching academic positions, museum work, library work, editorial work, positions in the travel and tourist industry,

and government positions in foreign service. The major also prepares students to enter graduate school in classics, comparative literature, linguistics, history, and other fields (for university teaching positions). Other opportunities include careers in law, journalism, and business.

Expectations of Transfer Students

Ideally transfer students should have completed fourth-semester Greek and courses in ancient history or classical culture.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: CLAS 1000 and 1010 (take under general electives if not taken in Area C)

Area F: 18

GREK 1001, 1002; CLAS 1020 or CLAS(ANTH) 2000

Select nine hours from the following: CMLT 2210; HIST 2301; LING 2100; PHIL 1500

Major Requirements: 27

GREK 2001, 2002

Five 4000-level GREK courses

Two courses 3000-level or above in CLAS, GREK, LATN

Major Electives: 6

Two courses 3000-level or above, in any combination, in CLAS, GREK, or LATN, or courses in ANTH, ARHI, CMLT, HIST, LING, PHIL that have a significant component dealing with the ancient Greco-Roman world and are approved by the Classics Department, or 1000- or 2000-level Latin.

General Electives: 27

(Refer to College-wide requirements when selecting general electives.)

Upper division (12-18 hours)

Lower division (9-15 hours)

The hours vary depending upon whether or not any 1000/2000-level Latin courses are chosen in the Major Electives category; if none are taken, majors must complete at least 12 more hours of Upper Division course work and up to 15 hours of Lower Division course work; if one 1000/2000-level course is taken in the Major Electives category, the student must complete at least 15 hours of Upper Division electives and up to 12 Lower Division hours; if two 1000/

2000-level courses are taken in the Major Electives category, the student must complete at least 18 hours of Upper Division electives and up to 9 Lower Division hours.

Total hours required 120

Scholarship

The Warlick-Mannion Scholarship (up to \$1,000 per year) is available.

Minor in Greek

Contact the department for requirements.

Health and Physical Education

Degree

Bachelor of Science in Education (B.S. Ed.)

Contact Person

Dr. Wilma Harrington

Physical Education Program Coordinator

wilmah@uga.cc.uga.edu

(706) 542-5947

Department

Physical Education and Sport Studies

College of Education

Description of the Program

Completion of this program prepares the student for certification to teach health and physical education, grades P-12, in Georgia. An athletic coaching minor is also available for those students wishing to prepare for coaching responsibilities.

Career Opportunities

The State of Georgia requires that physical education be taught daily in the elementary and middle schools and one unit is required in the secondary schools; therefore, the demand for certified teachers in health and physical education will remain viable.

Entrance Requirements

All students must have a minimum overall GPA of at least 2.3 for acceptance into the program.

Expectations of Transfer Students

Students transferring at the junior level should have completed Areas A, C, D, E, and F in the UGA Core Curriculum. Area D (Science, Math, and Technology) should include the equivalent of CHEM 1110, 1110L and BIOL 1103-1103L. Area E (Social Sciences) should include the equivalent of HIST 2111 or 2112 and POLS 1101-1101D. Area F (major-related courses) should include the equivalent of CBIO 2200-2200L, CBIO 2210-2210L, EPSY 2020, and EFND 2030.

Special Requirements

To complete the degree, a student must be admitted to teacher education. To receive a student teaching assignment, a student must have at least a 2.5 overall grade point average.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area D:</i> CHEM 1110, 1110L, and BIOL 1103-1103L	
Area F:	18
CBIO 2200-2200L, 2210-2210L; EFND 2030; EPSY 2020; PEDB 1630; 3 hours of electives	
<u>Major Requirements:</u>	58
EXRS 3600, 3700; HPRB 1710, 3400, 5060, 5210; PEDS 3100, 3110, 3120, 3210, 3220, 3360, 3720, 4300-4300L, 4330-4330L, 4610-4610L, 4750, 4900, 5460	
<u>Major Electives:</u>	2
Choose two hours of upper level EXRS, HPRB, or PEDS courses	
<i>Total hours required</i>	120

Scholarships

The Coach Mike Castronis Scholarship, the Clifford Lewis Scholarship, and the Mary Ella Soule Scholarship are given annually to upper division students in the major.

Minor in Physical Education/Athletic Coaching

Contact the department for requirements.

Health Promotion and Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

David Hayes
Undergraduate Coordinator
dmhayes@uga.cc.uga.edu
(706) 542-4369

Department

Health Promotion and Behavior
College of Education

Description of the Program

Students majoring in Health Promotion and Education may choose one of two areas of emphasis: School Health or Health Promotion and Wellness. Depending on the area of emphasis, students are prepared either to work in schools with P-12

teacher certification, or to work in health promotion and wellness positions in community, health care and worksite settings.

Entrance Requirements

Standards for admission of freshmen to the College of Education are the same as for those admitted to the University. Enrollment in the College of Education does not constitute admission as a candidate for a degree in teacher education or professional certification in other professional fields. Each student who seeks a professional teaching degree or professional teacher certification must apply for admission to Teacher Education through the College's Educational Field Experience Office, 315 Aderhold Hall.

Expectations of Transfer Students

The following grade point averages (GPAs) will apply: All external transfer students must have a minimum overall GPA of at least a 2.3 for acceptance to the College. All transfers from within the University must meet the following minimum requirements: for up to 30 semester hours, 2.0; from 31 to 60 semester hours, 2.1; from 61 to 90 semester hours, 2.2; and for 91 or more semester hours, a 2.3 GPA.

AREA OF EMPHASIS: SCHOOL HEALTH

Career Opportunities

A major in Health Promotion and Education in the school health area leads to P-12 teacher certification with professional employment opportunities in public and private schools, day care facilities and community agencies.

Special Requirements

- 1) A 2.5 GPA is required before HPRB 3450 Practicums and HPRB 5460 Student Teaching.
- 2) A student must be admitted to Teacher Education Program before enrolling in HPRB 3400 and 5460.
- 3) Application for Teacher Education can be made after completion of EFND 2030, SPCM 1100 or 1500, ENGL 1101 and 1102, an overall GPA of 2.5, passing of Regents test, and one semester enrolled at UGA.
- 4) Application for Student Teaching must be completed through Room 315 Aderhold by the end of the first week of the semester preceding student teaching.
- 5) A student must be certified in First Aid and CPR before student teaching. This requirement may be satisfied with ARC or AHA cards or by taking HPRB 1190.
- 6) A grade of C or better is required for all courses included in the Common Major Requirements and the Area of Emphasis.

7) It is recommended that all HPRB students compile and maintain a portfolio documenting and exhibiting work or experiences gained throughout the undergraduate program including the practicums and student teaching.

Internships

Practicums and student teaching assignments are arranged through the HPRB department and the College of Education. Students will consult with HPRB department Student Teaching Coordinator to initiate this process.

AREA OF EMPHASIS: HEALTH PROMOTION AND WELLNESS

Career Opportunities

Professional positions are available in public and private community agencies, business and industry, and health care facilities.

Special Requirements

- 1) A 2.5 GPA is required before enrolling in HPRB 4400 and 5560.
- 2) CBIO 2200-2200L and 2210-2210L are pre-requisites for EXRS 4310, 4630-4360L, and 4640-4640L.
- 3) A grade of C or better is required for all courses included in the Common Major Requirements and the Area of Emphasis.
- 4) First Aid and CPR certification is required. May be satisfied with ARC or AHA cards or by taking HPRB 1190.
- 5) Application for HPRB 5560 Field Experience must be completed by midterm of the semester preceding the field experience in order to be cleared to register. Field Experience application packets are available from the Field Experience Coordinator.
- 6) It is recommended that all HPRB students compile and maintain a portfolio documenting and exhibiting work or experiences gained throughout the undergraduate program including the practicums and field experience.

Internships

Practicums and field experiences are arranged by the students in cooperation with the HPRB department Field Experience Coordinator. Paid field experiences are not to be expected.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E: See Core Curriculum	42
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Area F:	18
CBIO 2200-2200L, 2210-2210L; SPCM 1110 or 1500	

CSCI 1100-1100L and STAT 2000 (Health Promotion and Wellness students)
EFND 2030 and EPSY 2020 (School Health students)

Major Requirements: 49-53

EXRS 3700; FDNS 2100; HPRB 1710, 3450, 3020, 3210, 3700, 3750, 5460; PSYC 2101

Choose Option I or Option II:

Option I: School Health Emphasis
EDIT 2010; HPRB 3400, 5060, 5210; SPED 2000

Option II: Health Promotion and Wellness Emphasis

EMKT 4100 or SPCM(HPRB) 4610; EXRS 4310 or 4640-4640L; HPRB 4400

Major Electives: 7-11

HPRB 1190, 1850, 3150, 3190, 4000, 4450, 5060*, 5160, 5210*; SPCM(HPRB) 4610

*Health Promotion and Wellness students only

Total hours required 120

History

Degree

Bachelor of Arts (A.B.)

Contact Person

Coordinator
(706) 542-2503 or 542-2053

Department

Department of History
College of Arts and Sciences

Description of the Program

Students are encouraged to develop an understanding of history and culture of medieval as well as modern times, and to supplement this with the use of a foreign language.

Career Opportunities

Students who decide to major in history embark upon a course of study that promises both academic and professional rewards. A sound component of a liberal education, history also serves practical needs, providing a solid background for careers in law, journalism, government service, and history preservation. The history major also meets an important need of the business world by providing general training in analysis and writing, and by developing a sense of balanced judgment. For those who choose to teach history or social studies in secondary schools, the history major provides the necessary subject-matter content. Finally, the history major and especially the area of

emphasis in Historical and Area Studies prepare the student not only for graduate work in history but also for other professional careers which call for a satisfactory acquisition of knowledge and skills related to the study of the past.

Entrance Requirements

Anyone who decides to become a history major must first file a "Declaration of Major" form with the College of Arts and Sciences. The prospective major then must go to the Department of History Main Office (LeConte 220) to arrange for a meeting with the Undergraduate Advisor and fill out an advisee information card. A permanent faculty member will be assigned to the student for advisement. These steps should be taken during the last semester of the sophomore year or the first semester of the junior year. If the student is a last-semester sophomore, he or she should bring an official college check sheet to the history office. If a check sheet is not available or cannot be secured from the office of the Dean of Arts and Sciences, it is advisable to request an official transcript from the Registrar's office. New history majors, especially transfers from other colleges, should always present an official transcript of accepted courses from the University of Georgia Registrar's Office.

Expectations of Transfer Students

The major in history requires at least one 1000-2000 level history course in **each** of at least **three** of the following areas: US/North American history, Latin American history, European history, African history, Middle Eastern history, Asian history, or world history. At least 18 semester hours of course work must be taken in residence at the University of Georgia.

Special Requirements

At least 15 hours of electives for this major must be in courses numbered 3000 or above and 18-19 hours in courses at any level. A C average in history courses is required.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
Three to six hours of a foreign language (for competency through the fourth semester of one language or two semesters in a second language)	
Three to six hours of electives in ANTH, ARHI, GEOG, PHIL, POLS, RELI, SOCI, or Literature	

At least one course in each of three of the following areas:

U.S./North America: HIST 2111, 2111H, 2112, 2112H

Latin America: HIST 2221, 2222

Western Civilization: HIST 2301, 2302, 2311H, 2312H

Africa: HIST 2501, 2502

Middle East: HIST 2560

Asian History: HIST 2601, 2602

World History: HIST 2701, 2702

Major Requirements:

At least 24 hours in courses numbered 3000-level or above, including the following: HIST 4990; at least one advanced course in each of three of the following seven geographic areas; at least one advanced course of a topical nature from list B below; at least one course in HIST 4000-level or above (excluding 4990, the senior seminar); at least one course in HIST focussing on the period before 1600 and one focussing on the period after 1600.

For the area of emphasis in Historical and Area Studies: At least three courses in one of the seven areas listed below, plus at least one additional advanced course relating to that geographical area in a field outside history.

A. Geographic Areas

North America: HIST 3020, 3030, 3060, 3071, 3072, 3073, 3080H, 3090, 3250, 4071, 4072, 4074, 4092, 4100

Latin America: HIST 3220, 3230, 3240, 3250, 4210

Western Europe: HIST 3310, 3340, 3350, 3361, 3362, 3371, 3372, 3381, 3382, 3390, 3400, 4311, 4312, 4321, 4322, 4330, 4381, 4382, 4383, 4391, 4392, 4400

Eastern Europe: HIST 3411, 3412

Africa: HIST 3500, 3511, 3512, 3580, 4510, 4540

Middle East: HIST 3562, 3570H, 3580, 4530

Asia: HIST 3601, 3602, 3661, 3662, 3663, 3670H, 3680H

B. Courses of a Topical Nature

HIST 3101, 3102, 3321, 3323, 3324, 3332, 3421, 3432, 3433, 3530, 3720H, 3751, 3752, 4000, 4030, 4040, 4050, 4060, 4075, 4080, 4091, 4200, 4220, 4300, 4340, 4350, 4360, 4371, 4372, 4373, 4374, 4375, 4410, 4500, 4550, 4600, 4700, 4750, 4960, 4960H, 4990H

Major Electives: 3
UNIV 2201 (recommended)
For the area of emphasis: At least the fourth semester of a foreign language relevant to the student's geographic focus or at least two semesters of each of two foreign languages relevant to the study of the student's geographic focus

General Electives: 27-30
Upper division: (15 hours)
Any level (12-15 hours)
Total hours required 120

Scholarship and Awards

The Department of History makes several annual awards, including an award for the Outstanding Senior Paper (Alf Andrew Heggoy Award); an award to the outstanding junior who has demonstrated excellence in history and who has an interest in Georgia history (Joe Brown Connolly Award); and a scholarship to an outstanding junior history major (Phyllis Jenkins Barrow scholarship).

Minor in History

Contact the department for requirements.

Home Economics Education

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Helen Hall
hchall@uga.cc.uga.edu
(706) 542-1682

Department

Leadership and Lifelong Learning
College of Education

Description of the Program

The major in home economics education is offered jointly by the College of Family and Consumer Sciences and the College of Education. Students completing this program fulfill the requirements for a teacher's certificate in home economics.

Career Opportunities

Home economics education graduates teach middle and high school students to improve the quality of life for individuals and families. A graduate might teach courses in nutrition, parenting, child care/elder care, clothing/apparel design and construction, single and family living, interior design, food service occupations, and/or consumer education.

Graduates are also employed as extension agents and are hired by businesses to market food and food preparation equipment, consult on home or clothing design, and advise on family resource management or child development. Graduates with advanced degrees may be employed by colleges and universities.

Entrance Requirements

A 2.5 GPA is required for admission to the Teacher Education program and enrollment in professional education courses.

Expectations of Transfer Students

Recommended courses: Chemistry sequence, psychology, economics, foundations of education, human development and the educative process, and computer technology.

Program Requirements

Semester Core Curriculum	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area D: CHEM 1110, 1110L or BIOL 1103-1103L and 1104-1104L

Preferred courses in Area E: ECON 2105 and PSYC 1101

Area F:	18
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CHFD 2100; EFND 2030; EPSY 2020; FDNS 2100; 6 hours from approved Area F courses

Major Requirements:	50
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HACE 2000; EHEC 5460; EOCS 2450, 4350, 4360, 5550; FDNS 3600-3600L, 4050; HACE 3000, 3200; HACE 3300 or 4350; TXMI 2100, 2520, 3350; choose one course from CHFD 2950-2950L, 3930, 4330, 4850

General Electives:	10
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Upper division (0-2 hours)

Any level (8-10 hours)

Total hours required	120
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Honors Interdisciplinary Studies (A.B., B.S., B.F.A.)

Degrees
Bachelor of Arts (A.B.), Bachelor of Science (B.S.),
Bachelor of Fine Arts (B.F.A.)

Contact Person
Robert L. Anderson
Dean's Office
College of Arts and Sciences
rla@uga.cc.uga.edu
(706) 542-3400

Department
College of Arts and Sciences

Description of the Program
The honors interdisciplinary studies major is similar in intent and design to the interdisciplinary studies major, but is open only to Honors Program participants. For more information, see Interdisciplinary Studies.

Honors Interdisciplinary Studies (B.S.A.)

Degree
Bachelor of Science in Agriculture (B.S.A.)

Contact Person
Josef M. Broder
Assistant Dean, Academic Affairs
jbroder@agecon.uga.edu
(706) 542-1611

Department
College of Agricultural and Environmental Sciences

Description of the Program
Students may major in honors interdisciplinary studies under the Bachelor of Science in Agriculture degree. The major is administered by the College through the University Honors Program and is open only to Honors students enrolled in the College of Agricultural and Environmental Sciences. Students may pursue the honors interdisciplinary studies major in any academic department within the College. The major is available to Honors students who seek an interdisciplinary, cohesive program of study not allowed under existing disciplinary majors.

An honors interdisciplinary studies major is designed to allow an Honors student to build an integrated program in a coherently defined interdisciplinary combination of courses. The definition of area may be applied as a chronological, geographical, subject matter, or any other logical and cohesive program of study.

Career Opportunities
Students may develop their own degree program to prepare for careers as consultants, business owners, engineers, environmental protection agents, graduate students, bankers, farmers, teachers, or any other profession in agricultural and environmental sciences.

Entrance Requirements and Expectations of Transfer Students
The honors interdisciplinary studies major (HIS) is open only to Honors students enrolled in the College of Agricultural and Environmental Sciences.

Program Requirements	
<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113	
<i>Preferred courses in Area D:</i> BIOL 1107-1107L or BTNY 1210-1210L; CHEM 1211-1211L; and one course from CSCI 1100-1100L, 1210; MATH 2200, 2200L, 2210, 2210L; STAT 2000, 2210	
Area F:	18
Lower division science courses related to the major, such as AAEC, ADSC, BTNY, CHEM, CRSS, CSCI, EHSC, ENGR, FDST, GENE, GEOL, HORT, PHYS, POUL, STAT	
<u>Major Requirements</u> (Primary Subject):	14
Fourteen hours of senior division courses must be in one subject (primary). These hours must be selected in consultation with the department in which the major is taken.	
<u>Major Electives</u> (Related Subjects):	20
At least six hours must be senior division courses.	
<u>General Electives:</u>	26
Upper division (19 hours)	
Any level (7 hours)	
<i>Total hours required</i>	120

Special Requirements
Students may complete an Honors Thesis.

Scholarships
Several scholarships are available to students in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships
Internships are available but not required.

Horticulture

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Tim Smalley

Associate Professor and Undergraduate Coordinator
tsmalley@uga.cc.uga.edu
(706)542-0788

Department

Horticulture

College of Agricultural and Environmental Sciences

Description of the Program

The horticulture curriculum educates students in the application of basic principles to the propagation, culture, production, marketing, and postharvest physiology of fruits, vegetables, ornamental plants, and herbs. The curriculum has the flexibility to allow a student to select courses in turf management (the culture and management of turfgrasses on golf courses, recreational areas, and home lawns); floriculture/woody ornamentals (including the use of plants indoors for aesthetic, therapeutic, as well as pollution abatement purposes); and fruit and vegetable production and management.

Career Opportunities

Career opportunities include management, production, marketing, or postharvest handling of vegetables, fruits, flowers, or ornamental plants; salesperson and/or technical advisor with a commercial firm; field advisor or manager of nurseries, greenhouses, parks, arboretums, botanical gardens, and garden centers; teacher in high schools or technical schools; horticultural journalist; agricultural extension agent or governmental employee. A student may select a curriculum for entrance into graduate school, which prepares for a career in horticultural research and/or teaching at the college or university level.

Expectations of Transfer Students

Courses in chemistry, biology/botany, and pre-calculus are desirable.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100

Preferred courses in Area D: CHEM 1211, 1211L, 1212, 1212L and MATH 2200, 2200L

Preferred course in Area E: ECON 2106 (take under major electives if not taken in Area E)

Area F:

BIOL 1107-1107L or BTNY 1210-1210L;
BIOL 1108-1108L or BTNY 1220-1220L; PHYS 1010 or 1111-1111L;
five to seven hours of electives

Major Requirements:

CRSS 3050-3050L; CRSS 4340-4340L or ENTO 3740-3740L or ENTO(CRSS) 4250-4250L; HORT 3010, 3020, 3620-3620L, 3700 or 3710, 4000, 4010-4010L, 4110, 4210; PATH 3530-3530L

Major Electives:

Choose 20 hours from AAEC 2110, 3100, 3980; BTNY 4230-4230L, 4650-4650L; CHEM 2100; CRSS 2830, 3270-3270L; CRSS (ENTO) (PATH) 3500; GENE (BIOL) 3204; GEOG 1112; HORT 2000, 3140, 3500-3500L, 3510-3510L, 3630-3630L, 3700 or 3710, 4010-4010L, 4020-4020L, 4050, 4090, 4890; HORT (BTNY) (ANTH) 3440; PATH 4280-4280L

General Electives:

Any level

Total hours required

Scholarships

Numerous general national and college scholarships and two scholarships specific to horticulture are available. For more information about college-wide scholarships contact the Office of Academic Affairs in the College.

Internships

Internships are highly recommended but not required. Numerous national and state internships are available.

Minor in Horticulture

Contact the department for requirements.

Housing

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. Anne Sweaney

Professor

asweaney@fcs.uga.edu
(706)542-4877

Department

Housing and Consumer Economics

College of Family and Consumer Sciences

Description of the Program

The Housing major focuses on the socio-economic aspects of housing. Special emphasis is given to housing needs and the manner in which the family,

the private sector, and government policy respond to those needs. The program features an in-depth study of housing finance and the range of housing alternatives. The program may also be used as preparation for graduate study or as a pre-professional degree. Certification as a housing counselor and study in housing for the elderly are also available.

Career Opportunities

Students with a housing major are prepared for employment with local, state, and federal housing agencies, helping tenants with housing use and maintenance practices, and in retrofitting older houses to meet minimum housing standards in structure and/or energy consumption. Graduates may enter employment in real estate firms, utility companies, planning commissions, and with manufacturers of housing and housing components, including manufactured homes, kitchens, and storage units. Other sources of employment are financial institutions involved with housing loans, extension service, and property management firms. Students have an opportunity to earn a housing counselor's certificate which enables them to work with clients and families in home buying when encountering housing problems.

Expectations of Transfer Students

Students transferring into the housing major should have fulfilled the core curriculum requirements, including social science, humanities, and English. Students should have also completed micro and macroeconomics, introductory statistics, computer science and introductory sociology, math or logic.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred course in Area C:</i> SPCM 1100	
<i>Preferred courses in Area E:</i> ECON 2105 and 2106	
Area F:	18
HACE 2100; choose 15 hours from ACCT 2101, 2102; CHFD 2100; CSCI 1301-1301L; FDNS 2100; LEGL 2700; MATH 1113, 2200, 2200L, 2210, 2210L; PSYC 1101; SOCI 1101; STAT 2000; TXMI 2100	
<u>Major Requirements:</u>	22
HACE 2000, 3100, 3150, 3200, 3300, 4300, 4310; REAL 4000	
<u>Major Electives:</u>	27
Choose 15 hours from HACE 4350, 4400, 5350, 5910 (3-6 hours); any other HACE	

course not listed under major requirements

Choose 12 hours from ECON 2105, 2106; STAT 2000; electives from POLS, SOCI, SOWK, or public administration

General Electives: 11
Upper division (3 hours)
Any level (8 hours)

Total hours required 120

Minor in Housing

Contact the department for requirements.

Interdisciplinary Studies

Degrees

Bachelor of Science (B.S.). Bachelor of Arts (A.B.).
Bachelor of Fine Arts (B.F.A.)

Contact Person

Robert L. Anderson
Dean's Office
College of Arts and Sciences.
rla@uga.cc.uga.edu
(706)542-3400

Description of the Program

A student with academic interests for which no suitable major is offered by any single department in the College of Arts and Sciences may pursue an Interdisciplinary Studies (IDS) major. An IDS major plans a program of study and senior thesis with a faculty advisor and an advisory committee, who are chosen by the student and the IDS Coordinator. The Interdisciplinary Studies major consists of a minimum of 24 hours of courses plus a Senior Thesis (3 hours) on a topic of special interest. The 24 hours of the major must be drawn from two or more departments of the College of Arts and Sciences. Some programs may include courses from other colleges within the University, although programs of study involving more than 9 hours outside of Arts and Sciences may require special permission. An IDS major may propose her or his own major, or participate in one of several interdisciplinary programs already in place, such as archaeological sciences, geophysics, global studies, neurobiology, and scientific illustration.

Applicants for an IDS major must have completed 27 credit hours of college courses, but not more than 60, with a GPA of 3.0 or higher. Students must maintain at least a 3.0 average on all courses taken in order to remain as IDS majors. Programs that reflect an attempt to "pull something together" near the end of the undergraduate program or to look back and attempt to create a theme to fit courses already completed are not in keeping with the spirit of the IDS major

The IDS program is a rigorous one that requires early planning on the student's part. The first step for students interested in an IDS major is to contact the Coordinator of the Division of Interdisciplinary Studies for further information.

Minor in Interdisciplinary Cognitive Science

Contact the Coordinator of the Division of Interdisciplinary Studies for requirements.

International Business

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Sally Vandiver

Academic Advisor

svandiver@cbacc.cba.uga.edu

(706)542-3904

Department

International Business Programs

Terry College of Business

Description of the Program

A growing number of foreign and U.S. companies transact a significant and continually expanding portion of their business through international channels. More and more businesses are having to go abroad to find new markets as domestic markets mature. Even those corporations conducting business strictly in this country have to compete with foreign imports. As a result, major corporations that are taking advantage of international opportunities have a "competitive edge."

The Terry College of Business has designed its International Business Program to give its graduates a "competitive edge." While providing opportunities for students to gain the knowledge and skills required for international business careers, the program also assists them in developing an understanding of the mechanisms and institutions of the international economy.

The curriculum is designed to develop a broad background of knowledge in a business field as well as a strong concentration in a foreign language. In addition to the basic undergraduate business curriculum, international business majors are required to take four of the following six courses: Using Accounting Information in a Multinational Setting, the International Business Environment, International Finance, Internship or Cooperative Education, International Legal Transactions for Business, International Strategic Management, or International Marketing.

Students also choose an area of concentration in either Banking and Finance, Accounting, Real

Estate, Economics, Marketing, Management, or Global Studies. The Global Studies Certificate is administered through the Center for Global Policy Studies. In this program students conduct additional research in a chosen geographic area, gaining in-depth knowledge of its culture, economics, politics, and religion.

The International Business program is the only major in the Terry College of Business requiring a foreign language sequence. Students may choose to complete a minor in a language as part of the International Business program.

Many undergraduate international business majors broaden their cultural horizons and earn degree credit simultaneously by participating in various study abroad programs. By participating in these programs, students obtain firsthand knowledge of a foreign language and culture as well as develop an awareness of economic and political issues which affect commerce and characterize foreign marketplaces.

Entrance Requirements

Students accepted to International Business must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, 2102L, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours

42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: SPCM 1100 or 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 (take under general electives if not taken in Area D)	
Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)	
Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
Major Requirements:	33
FINA 3000; MGMT 3000; MSIT 3000; MARK 3000	
Choose four courses from ECON 4040; MGMT 5560; MARK 4700; FINA 4810; LEGL 4600; ACCT 4000	
Choose Option I or Option II:	
Option I: Language Minor	
Choose three language courses from the department in which you are minoring	
Option II: Business Concentration	
Choose three courses outside the major	3
Major Electives:	
Choose one course from ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000	
General Electives:	24
(Refer to College-wide requirements when selecting general electives.)	
Five courses in foreign language	
Choose three business courses outside the major from one of the following groups:	
Management, Human Resource: MGMT 5820, 5860, MGMT (SPCM) 5870	
Management, Production: MGMT 4240, 4250, plus one other MGMT course	
Management, General: MGMT 4240, 5400, 5420, 5920	
Marketing: MARK 4100, 4200, plus one other MARK course	
Economics: ECON 4010, 4020, plus one other ECON course	
Accounting: ACCT 5000, plus two other ACCT courses	
Insurance: RMIN 4000, 5100, 5110	
Finance: ECON (FINA) 4300, FINA 4310, plus one other FINA course	
Real Estate: REAL 4000, plus two other REAL courses	
Legal Studies: LEGL 4300, plus two other LEGL courses	
Total hours required	120

Italian

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Doris Kadish
(706) 542-1075

Department

Romance Languages
College of Arts and Sciences

Description of the Program

Students majoring in Italian will take courses that combine the study of literature, language, culture, and linguistics, which will lead to a development of language proficiency and an understanding of the Italian-speaking world.

Career Opportunities

Many students majoring in Italian will become teachers or go on to graduate school, but proficiency in a foreign language also helps majors find employment in the public and private sectors.

Entrance Requirements

A student continuing a language taken in high school must take either the language achievement test of the College Entrance Examination Board or the placement test administered by the University of Georgia Counseling and Testing Center. Students will be placed in the appropriate course on the basis of their scores and other pertinent information. Students with a knowledge of Italian should contact the department for placement.

Expectations of Transfer Students

Four courses or 14 semester hours of beginning and intermediate Italian course work, equivalent to UGA ITAL 1001-2002, are required. Study abroad courses can be used to fulfill part or all of these prerequisites, upon permission of advisors in the department.

Special Requirements

A minimum grade of C is required in course work for this major.

No student may receive credit for any course which is a prerequisite to a course for which college credit has already been received. Exceptions may be made only by the head of the department.

Certain courses in the Department of Romance Languages are not open to native speakers of that language. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was French, Italian, Portuguese, or Spanish.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
ITAL 2001, 2002; LING 2100	
Choose 9 hours from ARHI 2100; CLAS 1000, 1010, 1020; CMLT 2210, 2220; DRAM 2000, 2120; ENGL 2310, 2320, 2400; HIST 2301, 2302, 2502; ITAL 1001, 1002, 2500, 2600; MUSI 2020; PHIL 1000; PORT 2600; RELI 1001, 1002, 1003; ROML 2550; SPAN 2550; WMST 1110, 2010; 1000/2000-level courses in another language; 1000/2000-level foreign language study abroad courses	
<u>Major Requirements:</u>	27
ITAL 3010, 4010, 4050, 4060, 4070	
Choose 12 hours from ITAL 4040 (0-3 hours), 4120 (0-12 hours)	
<u>General Electives:</u>	33
(Refer to College-wide requirements when selecting general electives.)	
Upper division (12 hours)	
Any level (21 hours)	
<i>Total hours required</i>	120

Study Abroad

The Department of Romance Languages encourages all students to participate in an accredited study abroad program for an academic year, a semester, or the summer. Prior departmental approval is required for credit. Contact the Office of International Education (542-1557) for information about programs. Check with the department for the maximum number of hours that will count for a major or minor.

Minor in Italian

Contact the department for requirements.

Japanese Language and Literature

Degree

Bachelor of Arts (A.B.)

Contact Person

Dezso Benedek
Program Director
cmsdezso@uga.cc.uga.edu
(706) 542-2146

Department

Comparative Literature
College of Arts and Sciences

Description of the Program

The program pays equal attention to the four language skills of speaking, listening, reading, and writing. Graduates should be able to read diverse Japanese texts with little external help except from dictionaries, and should also be able to express ideas about complex social and literary issues orally and in writing in grammatical Japanese.

Career Opportunities

Opportunities for graduates include graduate study, education, foreign service, and international business.

Entrance Requirements

The undergraduate major program in Japanese Language and Literature has no entrance requirements that differ from the entrance requirements for the College of Arts and Sciences as a whole. There are no placement examinations which measure students' fluency when they want to enroll in a Japanese language course above JPNS 1001.

Special Requirements

Students are required to attend the computer lab regularly to practice Japanese writing.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> At least one 2000-level literature course (take under major electives if not taken in Area C)	
Area F:	18
JPNS 1001, 1002	
Two 2000-level literature courses (3 hours may be satisfied under Area C in the core)	
Remaining hours taken in courses relevant to the study of language and literature, to be selected from transferable courses in AFAM, ARTS, CHNS, CLAS, LATN, GREK, JPNS, KREN, DRAM, ENGL, GRMN, RUSS, HIST, LING, MUSI, PHIL, RELI, ROML, ITAL, PORT, SPAN, FREN, SWAH, WMST, YORB	
<u>Major Requirements:</u>	27
Choose 9 hours from JPNS 3010, 3020, 4110, 4120	
Choose three Asian Literature courses from CMLT 4600, 4610, 4620; JPNS 4500	
Choose three Asian Culture courses from CMLT(ANTH) 3180; GEOG 4730, 4740; HIST 3601, 3602, 3661, 3662, 3663, 4600; POLS 4390; RELI 3300, 4401; a fourth Asian Literature course (CMLT 4600, 4610, 4620, or JPNS 4500)	

Major Electives:	6
JPNS 2001, 2002	
General Electives:	27
(Refer to College-wide requirements when selecting general electives.)	
Upper division (15 hours)	
Any level (12 hours)	
Total hours required	120

Minor in Japanese Language and Literature

Contact the Department of Comparative Literature for requirements.

Landscape Architecture

Degree

Bachelor of Landscape Architecture (B.L.A.)

Contact Persons

Scott S. Weinberg
Director of Resident Instruction
weinberg@uga.cc.uga.edu
(706) 542-4715

Marsha M. Grizzle
Degree Program Specialist
mgrizzle@uga.cc.uga.edu
(706) 542-4725

Department

School of Environmental Design

Description of the Program

The undergraduate program leading to the degree of Bachelor of Landscape Architecture includes 156 credit hours and is designed as a professional curriculum. The professional curriculum contains 96 hours of Landscape Architecture courses, which includes 8 hours of Internship and one course in surveying. During five years of study, students are progressively introduced to the complexities of environmental design through a series of graduated studio exercises. These are augmented by lecture classes on theoretical, philosophical and technical subjects. Consultants visit the School to lecture on new ideas and philosophies and students are required to participate in several prescribed field trips arranged on a class by class basis to visit important projects in the southeast. During part of the fourth year, students are required to obtain approved employment as interns with professional design offices to gain professional experience.

Career Opportunities

Landscape architecture implies a problem-solving orientation. Theoretical knowledge is applied to arrive at practical solutions in a variety of settings. In preparation for careers, students work in a professional internship. The range of professional employment includes: private landscape design

and planning firms; local, state and regional park and planning agencies; and federal agencies concerned with design, planning and management of large land areas such as national forests and parks.

Entrance Requirements

There are no special entrance requirements for freshmen. Students transferring to the School from other majors inside the University and from schools other than UGA must have a 2.5 GPA.

Expectations of Transfer Students

For students transferring into the School, a minimum grade point average of 2.5 is required. Recommended background preparation for transfer includes courses in botany, horticulture, engineering, graphic arts, and physical science.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area D: BIOL 1103-1103L or BTNY 1210-1210L and GEOG 1111 and CSCI 1210 or STAT 2000

Area F:	18
EDES 1500, 2210, 2220, 2510; ENGR 1020; LAND 2310, 2320	

<u>Major Requirements:</u>	88
EDES 2520, 3230, 4240; LAND 1600, 2010, 2020, 3030, 3040, 3330, 3340, 3410, 3420, 3530, 3540, 4050, 4060, 4070, 4250, 4360, 4370, 4380, 4390, 4550, 4560, 4570, 4700, 4710, 4720, 4900	

<u>Major Electives:</u>	8
Eight hours from the following prefixes: ARTS, CRSS, EDES, ENTO, GEOG, GEOL, HORT, LAND, LEGL, REAL	

<i>Total hours required</i>	156
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Fees

Students are responsible for various tools and materials necessary for studio classes and for fees incurred for class field trips.

Scholarships

A number of scholarships are provided to the School of Environmental Design through the generosity of individuals, clubs and the School alumni society. These scholarships are granted based on academic performance in the School, leadership and need. The scholarships are awarded in September for the academic year. A request for applications is posted in spring semester, well in advance of the deadline. Availability of specific scholarships and amounts may vary from year to

year. Students may obtain complete information regarding scholarships in 609 Caldwell Hall.

Landscape and Grounds Management

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Tim Smalley

Associate Professor & Undergraduate Coordinator

tsmalley@uga.cc.uga.edu

(706) 542-0788

Department

Horticulture

College of Agricultural and Environmental Sciences

Description of the Program

This program is designed to educate students in the application of basic principles to the installation and management of environmentally sound landscapes, grounds, and interiorscapes. These functions include wetlands reclamation, replacement, and enhancement; minimization of the impact of agricultural chemicals on the environment; landscape waste management; and water quality and conservation in the home landscape and grounds, on the golf course, at amusement parks, commercial buildings and offices, and outdoor athletic facilities.

Career Opportunities

This major provides skills needed to own a landscape contracting or grounds management business or to work at the management level. Graduates may work for world renowned amusement parks such as Disney World, beautiful public gardens such as Callaway Gardens, a world renowned golf course such as Augusta National, or well-known athletic facilities such as Sanford Stadium. Opportunities are also available in sales, government, agricultural extension, and other agencies. Graduates may continue their education in graduate school, which could lead to a research and/or teaching career at a major university or in industry.

Expectations of Transfer Students

Courses in chemistry, biology/botany, and pre-calculus are desirable.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Hours

42

Preferred course in Area C: SPCM 1100

Preferred courses in Area D: BIOL

1107-1107L or BTNY 1210-1210L; and

CHEM 1211, 1211L

Area F:

AAEC 2110; BTNY 1220-1220L or BIOL

1108-1108L; ENGR 1020; 9-10 hours of

electives

Major Requirements:

AAEC 3100 or AAEC 3040; AAEC 3980;

CRSS 3050-3050L, 3270-3270L; CRSS

(ENTO)(PATH) 3500; ENGR 3070;

ENTO(CRSS) 4250-4250L; HORT

3500-3500L, 3510-3510L, 3700, 3710,

4000, 4010-4010L, 4090, 4110, 4210;

PATH 3530-3530L

General Electives:

Any level

Total hours required

18

48

12

120

Scholarships

Numerous general national and college scholarships and two scholarships specific to horticulture are available. For more information about college-wide scholarships, contact the Office of Academic Affairs

Internships

An internship is highly recommended but not required. Numerous national and state internships are available.

Latin

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Sarah Spence

Undergraduate Coordinator

sspace@uga.cc.uga.edu

(706) 542-0417

Department

Classics

College of Arts and Sciences

Description of the Program

This program provides students with an opportunity to pursue studies in Roman literature, history, archaeology, art, philosophy, and religion while concentrating on the Latin language.

Career Opportunities

Employment opportunities include teaching at the secondary level, non-teaching academic positions, museum, library, editorial work, travel and tourist industry, government positions in foreign service, graduate school in classics, comparative literature, linguistics, history, and other fields (for University

teaching positions). Other opportunities include careers in law, journalism, or business.

Expectations of Transfer Students

Ideally, transfer students should have completed fourth semester Latin, or three to four years of high school Latin and courses in ancient history or classical culture.

Program Requirements

Semester Core Curriculum **Hours**

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: CLAS 1000 and CLAS 1010 (take under general electives if not taken in Area C)

Area F: 18

LATN 1001, 1002; CLAS 1020 or CLAS (ANTH) 2000

Nine hours from CMLT 2210; HIST 2301; LING 2100; PHIL 1500

Major Requirements: 24

LATN 2001, 2002, 3010; five 3000/4000-level LATN courses

Major Electives: 9

Three courses 3000-level or above, in any combination, in CLAS, GREK, or LATN, or courses in ANTH, ARHI, CMLT, HIST, LING, PHIL that have a significant component dealing with the ancient Greco-Roman world and are approved by the Classics Department, or up to 6 hours of 1000- or 2000-level Greek.

General Electives: 27

(Refer to College-wide requirements when selecting general electives.)

Upper division (12-18 hours)

Lower division (9-15 hours)

The hours vary depending upon whether or not any 1000/2000-level Greek courses are chosen in the Major Electives category; if none are taken, majors must complete at least 12 more hours of Upper Division course work and up to 15 hours of Lower Division course work; if one 1000/2000-level course is taken in the Major Electives category, the student must complete at least 15 hours of Upper Division electives and up to 12 Lower Division hours; if two 1000/2000-level courses are taken in the Major Electives category, the student must complete at least 18 hours of Upper Division electives and up to 9 Lower Division hours.

Total hours required 120

Scholarship

The Warlick-Mannion Scholarship (up to \$1,000 per year) is available.

Minor in Latin

Contact the department for requirements.

Law

See Pre-Law on page 295 of this Bulletin, see the School of Law on page 79, or contact the School for a copy of the *Law School Bulletin* for additional information.

Linguistics

Degree

Bachelor of Arts (A.B.)

Contact Person

Director, Linguistics Program
director@linguistics.uga.edu
706-542-5099; Fax: 706-542-2897
www.linguistics.uga.edu

Department

Linguistics Program
College of Arts and Sciences

Description of the Program

Linguistics is an interdisciplinary program whose faculty are based in many departments in the Franklin College of Arts and Sciences and in the College of Education. Its undergraduate curriculum is designed to offer students the opportunity to learn about the many different ways that human language can be studied. Linguistics is not the same as the study of many different languages, although exposure to several languages is required in Area F of the Core requirements for the major. Foundation courses teach basic concepts about speech sounds, words, and their arrangement into meaningful patterns. Linguistics at UGA offers four applied areas: Cognitive Linguistics, Second Language Acquisition, Historical Linguistics, and Language Variation/Sociolinguistics. Majors and minors must take two foundation courses, and then will select other courses to gain experience in the applied areas and to pursue their interests.

Career Opportunities

While there are no jobs waiting for Linguistics majors as there might be for engineers or nurses, employers do value the Linguistics major. Exposure to languages promises communication skills, and the technical aspects of the study of language suggest that majors will be able to cope with technical materials; technical writing is one field in which Linguistics majors are likely to find employment. Students with extensive computer training

will find that Linguistics may offer them an edge for jobs in the expanding field of natural language processing and artificial intelligence. For those students who wish to continue their studies, the Linguistics major can provide a good foundation for professional programs or for graduate programs in Anthropology, Cognitive Sciences, English or another modern language, Psychology, and other fields besides Linguistics itself.

Expectations of Transfer Students

Transfer students who have taken Linguistics courses at other universities should contact the director of the Linguistics Program for evaluation and assignment of the appropriate equivalents in UGA courses.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
LING 2100; one modern foreign language through the fourth semester; two courses in non-Indo-European language (Arabic, Chinese, Hebrew, Japanese, Korean, Swahili, Yoruba, and others); additional hours to fulfill Area F from the following 1000/2000-level courses: ANTH, ARTI, CLAS, CMLT, ENGL, FREN, GEOG 1101-1101D, 1125-1125D, GEOG (ANTH)(CMLT)(HIST)(SOCL) 2100, GREK, GRMN, ITAL, LATN, PHIL, PORT, RELI, ROML, RUSS, SPAN, SPCM, SWAH	
<u>Major Requirements:</u>	27
LING 3060; LING(ENGL) 3150	
Two courses from ANTH (LING) 3080; ENGL(LING) 3030; FREN(LING) 3090; GRMN(LING) 3380; LING (ENGL) 3020; LING 3830; SPAN (LING) 3050	
Two courses from ANTH (LING) 4090; CMSD(LING) 4500; ENGL(LING) 4170; LING 4210, 4690; LING(ANTH) 4860	
Three courses from ANTH (LING) 3080, 4090; CLAS(LING) 2010; CMSD (LING) 4500; ELAN 5040, 5630; ENGL (LING) 3030, 4000, 4010, 4060, 4110, 4170, 4180; FREN(LING) 4630; GRMN (LING) 3380, GRMN(LING) 4460; LING 3060, 3830, 4210, 4690, 4710, 4900, 4910; LING(ANTH) 4860; LING (CLAS) 4610, 4620; LING(CMLT) 4870; LING(ENGL) 3020, 3150; PHIL(LING) 4300, 4510, 4520; SPAN (LING) 3050, 4650	

General Electives:	33
(Refer to College-wide requirements when selecting general electives.)	
Upper division (12 hours)	
Any level (21 hours)	
<i>Total hours required</i>	120
Minor in Linguistics	
Contact the Linguistics Program for requirements.	

Location Analysis

Degree
Bachelor of Business Administration (B.B.A.)
Contact Person
Professor S. Cornish
Department of Geography
204 GGS Building
(706) 542-1617
Departments
Department of Geography (College of Arts and Sciences) and Terry College of Business

Description of the Program

The major is a joint program between the Department of Geography and the Terry College of Business. The objective of location analysis is to determine the optimal location, size and design of facilities such as retail complexes, commercial office buildings, residential developments, or other industrial and commercial properties. Majors choose between a Marketing or Real Estate Specialty. After completing Freshman and Sophomore years and Business Core requirements, course work is split between developing further expertise in Marketing (Option I—speciality in market research) or Real Estate (Option II—speciality in development and finance) and courses in the Department of Geography. The Geography curriculum provides the student with an understanding of the locational decision-making behavior of firms in the context of the broader economic environment in the United States, as well as training in a number of spatial analytical techniques associated with Geographic Information Systems.

Entrance Requirements

Students accepted to Location Analysis must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, ACCT 2101, 2102, MGMT 2090, and MSIT 3000. These courses are

prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

Semester Core Curriculum Hours

Areas A-E: 42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: SPCM 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2100 or 2200 (take courses under general electives if not taken in Area E)

Area F: 18

ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090

Major Requirements: 33

FINA 3000; GEOG 4370-4370L; MARK 3000; MGMT 3000; MSIT 3000

Choose one course from GEOG 3630, 4470-4470L, 4610, 4620, 4630, 4650, 4660

Choose 15 hours from Marketing Emphasis or Real Estate Emphasis:

Area I (Marketing Emphasis):

GEOG 3620; MARK 4400; REAL 4000

Choose two courses from ECON 4040, 4200; MARK 4100, 4700

Area II (Real Estate Emphasis):

GEOG 3620; REAL 4000, 5080, 5090; REAL(FINA) 5100

Major Electives: 3

Choose one course from ACCT 4000; ECON 4000; FINA 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000

General Electives: 24

(Refer to College-wide requirements when selecting general electives.)

Five courses in Arts and Sciences, including any three of the following, other than the course taken under major requirements: GEOG 3630, 4470-4470L, 4610, 4620, 4630, 4650, 4660

One business course outside major
Two courses outside department

Total hours required 120

Magazines

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Dr. Ernest Hynds
Department Head
ehynds@uga.cc.uga.edu
(706) 542-5030

Department

Journalism
College of Journalism and Mass Communication

Description of the Program

The magazines major is designed to help students prepare for careers in magazines, specialized publications, and other employment areas which require expertise in information gathering, analysis of information, writing, and editing.

Career Opportunities

Magazine graduates typically begin their careers as reporters, writers, copy editors, or layout and design specialists.

Entrance Requirements

Applications are accepted only from students who have met *minimum* requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.5, and English proficiency (recentered SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the College is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the

College of Journalism and Mass Communication. A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching a decision on how many students may be admitted each semester, the Admissions Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying.

Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication. The deadline is 4:00 p.m. on Friday of the second full week of classes.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (including one hour of PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts and, depending on major, no more than 32 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Magazines major.

A grade of C or higher must be earned in any journalism and mass communication course or any prerequisite to a course which counts toward satisfaction of requirements for the A.B.J. degree.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Preferred course in Area D: STAT 2000	
Preferred course in Area E: ANTH 1102 or GEOG 1125-1125D	
Area F:	18
Six hours of a foreign Language sequence beyond CPC level	

ECON 2105 or 2106

Choose 9 hours from anthropology, art, classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics

Major Requirements: 30-32

JOUR 3310, 3410 or 3410H, 3510, 5580; JRLC 5040

Choose 3 to 15 hours (4 to 5 courses) from the following (at least 6 hours must be in writing/editing courses): JOUR 3610, 3710, 5010, 5170, 5300, 5360, 5370, 5410, 5530, 5590, 5600, 5620, 5700, 5800, 5990; JRLC 5080, 5210, 5490

Major Electives: 15

Choose 15 hours of upper division electives in no more than two disciplines other than journalism and mass communication, academic assistance, physical education, military, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

General Electives: 13-15

Choose 13 to 15 hours of courses at any level in any disciplines other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

Photojournalism Emphasis

Students seeking a photojournalism emphasis must take JOUR 3610, 3710, 5370, and one course from JOUR 5170, 5350, 5360, 5370, 5990

Total hours required 120

Fees

Some courses require the purchase of a supply card from the University bookstore.

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application during the spring semester that assures them of consideration for any of the scholarships for which they qualify for the coming academic year.

Internships

Students gain practical experience by serving internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Three semester credit

hours may be earned for successful completion of an internship if:

1. Advance approval is received from the student's department. (A written request must be submitted that includes a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
3. The internship covers a minimum number of weeks of full-time employment as determined by the department.
4. During the semester of the internship the student registers concurrently for JOUR 5010, which is included in the maximum semester hours of journalism and mass communication credit which may be earned toward the Magazines major.
5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Management

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Nancy Scott
Undergraduate Coordinator
nscott@cba.uga.edu
(706) 542-3729

Department

Management
Terry College of Business

Description of the Program

A primary objective of the Management major is to help students develop the perspective, the skills, and the knowledge needed to manage and lead the modern organization more effectively. What makes the life of a manager so interesting is that it requires one to address such a wide variety of problems—financial, material, human, legal, political, and environmental—almost every day. No other career provides such a rich mixture of challenges. To be successful under such conditions, students must be able to work with and through groups of people toward a common end and be able to communicate with others (in both written and oral form) the mission, goals, objectives, and direction of the organization which they

are chosen to lead. Further, in an increasingly complex and global business environment, students must be able to think creatively with regard to problem solving in all areas of the enterprise. The common program of study for students who are candidates for the Bachelor of Business Administration (B.B.A.) offers excellent opportunities to select course work which may well serve a variety of personal development goals in meeting the professional challenges outlined above. Within the Management major itself, the required "Management Core" (Operations, Human Resource Management, Ethics, Organizational Behavior, and Strategic Management) is designed to provide students with exposure to the central issues and competencies required for managers facing the twenty-first century.

Through appropriate selection of major elective courses, students may better prepare for career opportunities that utilize the specialized knowledge and skills offered in more specific areas, such as human resource management, association or non-profit management, operations management, or small business management.

In addition to course work, there are other means of achieving personal developmental needs for a career in management. A primary opportunity is through involvement in any of the many campus organizations. For a complete listing, stop by the Information Desk at the Tate Center. Managers are "joiners" and leaders. The best way to develop and demonstrate those qualities necessary for successful management is, quite simply, by joining and by leading whenever and wherever an opportunity occurs. Campus organizations provide just such an opportunity.

Career Opportunities

Many management majors join a major firm as management trainees. This experience prepares the new graduate for the challenges specific to a particular organization or industry and also gives senior managers the opportunity to assess a beginner's potential for higher-level leadership.

On the other hand, some students may choose to take a job with a hospital, a governmental agency, or some public sector organization, or start an entrepreneurial venture or join a family business. Others end up in such specialized areas as sales, manufacturing, purchasing, or human resource management. The career opportunities in management are limited only by a student's own dreams, aptitudes, ambition, and perseverance.

Entrance Requirements

Students accepted to Management must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours

42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: SPCM 1500 (take under general electives if not taken in Area C)

Preferred courses in Area D: MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)

Preferred courses in Area E: ECON 2100 or 2200 (take under general electives if not taken in Area E)

Area F:

18

ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090

Major Requirements:

33

FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; MGMT 4240 or 4260, 5400, 5440, 5820, 5920

Choose two of the following: MGMT 4250, 4270, 4800 (3 hrs. only), 4990H, 5000, 5210, 5220, 5230, 5420, 5500, 5530, 5560, 5580, 5860, 5870, 5960

Major Electives:

3

Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000

General Electives:

24

(Refer to College-wide requirements when selecting general electives.)

(At least one course must be upper division)

Five courses in Arts and Sciences

One business course outside major

Two courses outside department

Total hours required

120

Scholarships

In addition to a wide range of scholarships available to all students regardless of major, there are several scholarships specifically available to Management majors. The T. W. Reed Scholarship is awarded annually to the junior with the highest grade point average. The National Association of Purchasing Management (NAPM) Georgia Scholarship is awarded annually to an outstanding senior to support and promote the study of materials management and purchasing. The Frank and Nancy Moore Scholarship is awarded each Fall to a Management major who has demonstrated superior achievement both in and out of the classroom. The Atlanta Engineering Personnel Associates (AEP) is awarded each Spring to an outstanding senior who plans a career in human resource management. The David Haven Etheredge and John McCrea Etheredge Memorial Scholarship Fund is awarded to assist outstanding freshmen Management majors.

Internships and Cooperative Education

Internships and cooperative education opportunities are designed to give students a meaningful work experience in their chosen fields as a formal part of their academic programs. Some of the organizations providing such opportunities for Management majors include: Atlanta Gas Light, Shaw Industries, Mount Vernon Mills, IBM, Wachovia, Blue Cross/Blue Shield, State Farm Insurance, Southern Electronic Distributors, Media One, Coca-Cola, Southern Company, Merrill Lynch, Hyatt Hotels, Charter Hospitals, Clarke County School District, Georgia Pacific, and McMaster-Carr Supply Company.

Management Information Systems

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Barbara Lillith
Undergraduate Coordinator
blillith@cbacc.cba.uga.edu
(706) 542-3581

Department

Management
Terry College of Business

Description of the Program

The Department of Management's undergraduate

program in MIS is designed to educate future information systems professionals and managers. The program is not designed to train students to be computer scientists, programmers, or technicians. The emphasis is placed on the management of information systems so that graduates may ultimately assume managerial positions at the vice-presidential level. In some companies, information systems are of such strategic importance that managers with an MIS background are becoming chief executive officers.

The MIS course work offers choices that prepare students for a variety of jobs. The program is interdisciplinary in nature with specialized training in information systems, management, and information technology. It builds on the Terry College of Business common core, which includes course work in accounting, economics, legal studies, mathematics, statistics, computer programming, finance, marketing, production, and management. The program's educational objectives are realized through a variety of instructional methods, including "hands-on" computer experience; class lecture and discussion; textbook and article study; class assignments, laboratory projects, and applied team projects in the business community; demonstrations; field trips; and presentations by MIS practitioners.

Specifically, the MIS program requires 21 hours (7 courses) of major course work beyond the TCB common core. Three courses (Computer Programming in Business, Data Management, and Systems Analysis and Design) are taken by all MIS majors. The balance of the major courses may be chosen from such areas as Decision Support Systems, Telecommunications and Networking, Executive Support Systems, Rapid Application Development, Collaborative Work Systems, Managing the Information System Resource, Knowledge-Based Systems, and Business Application Software.

Career Opportunities

The MIS field is widely recognized for its current and future career potential. Specific career opportunities depend on personal interests. Graduates may directly enter the MIS function and rise through the MIS ranks or become MIS specialists in a given functional area, such as production or finance, and serve as the liaison between MIS and that functional area. Some graduates go into end-user support, often working in an information center. Employment opportunities exist with such organizations as hardware vendors, software vendors, and consulting firms that provide MIS products and services. Typical entry-level positions include applications programmer, systems analyst, information analyst, and end-user support specialist.

Entrance Requirements

Students accepted to Management Information Systems must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> SPCM 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)	
<i>Preferred courses in Area E:</i> ECON 2100 or 2200 (take under general electives if not taken in Area E)	
Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
<u>Major Requirements*:</u>	33
FINA 3000; MARK 3000; MGMT 3000, 4600, 4610, 4620, 5620, 5640, 5670; MSIT 3000	
Choose one course from MGMT 4800 (3 hrs. only), 5600, 5630, 5660, 5680, 5710, 5720	
*Note that MGMT 4600 and 4610 are prerequisites for all other courses in the program. Due to these and other prerequisites, this program cannot be completed in fewer than three semesters.	

Major Electives:

Choose one of the following: ACCT4000;
FINA 4000; ECON 4000; MARK 4000;
MGMT 4000; REAL 4000; RMIN 4000

General Electives:

(Refer to College-wide requirements when selecting general electives.)

(At least one course must be upper division)

Five courses in Arts and Sciences

One business course outside major

Two courses outside department

Total hours required

3

24

120

Scholarships

In addition to a wide range of scholarships available to all students regardless of major, the various companies represented on the UGA-MIS Industry Advisory Board annually award scholarships to outstanding undergraduate MIS majors.

Internships and Cooperative Education

Internships and cooperative education opportunities are designed to provide a meaningful work experience in Management Information Systems as a formal part of the academic programs. Some of the organizations providing such opportunities for MIS majors include Andersen Consulting, Lotus Development Corporation, IBM, CNN Interactive, Wachovia, Citicorp Credit Services, BellSouth Telecommunications, HBO, Ernst & Young, Walt Disney World, Towers Perrin, Continental Airlines, Norfolk Southern, and Hewlett-Packard.

Marine Sciences

Degree

Bachelor of Science (B.S.)

Contact Person

Dr. Robert E. Hodson, Director
School of Marine Programs
(706) 542-5868

Department

Marine Sciences
College of Arts and Sciences

Description of the Program

The Interdisciplinary Studies major in Marine Sciences is available to students maintaining a B average or better. Students have access to the extensive field and laboratory facilities of the School of Marine Programs in Athens and at Sapelo Island, Skidaway Island, and Brunswick on the Georgia coast. For additional information, see Interdisciplinary Studies in this Bulletin.

Marketing

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Robin Mladinich
Educational Program Specialist
rmladinich@cbacc.cba.uga.edu
(706) 542-3770

Department

Marketing and Distribution
Terry College of Business

Description of the Program

Marketing is an integral part of our everyday activities and experiences. It is concerned with developing, transporting, promoting, and selling the vast assortment of products and services needed to satisfy the diverse wants and needs of consumers. It is an indispensable part of business practice and a challenging field for study and research.

All marketing majors are required to take a core of courses devoted to the development of analytical skills. These required courses draw heavily upon both the behavioral and quantitative sciences and are designed to help students gain an understanding of the analytical methods and research procedures used in identifying and solving marketing problems. Specialized study is available in advertising and sales promotion, sales and sales management, logistics management, services marketing, direct marketing and international marketing.

The marketing faculty at UGA brings a broad range of perspectives and experiences to the classroom. All are dedicated teachers and active contributors to the marketing profession. Many are known nationally and internationally for their achievements, and studies in marketing journals consistently place UGA among the top marketing departments in the nation.

Throughout their program, marketing students work closely with the department's advisor, who provides assistance in course selection, individual program progress, and long-range planning.

The department sponsors a very active student organization which offers students valuable business contacts, leadership experience and social interaction. There are two marketing honor societies designed to recognize outstanding academic performance.

Career Opportunities

The purpose of the marketing major at UGA is to provide students with a basic understanding of marketing and its vital role in society. The marketing curriculum is future-oriented and emphasizes the skills needed for successful and responsible

careers in advertising, sales, sales management, wholesaling, research, physical distribution, product management, and related areas. The curriculum is designed to develop the broad background of knowledge required for continuing professional growth in a changing world that is constantly demanding better trained people for executive positions. There are more than 350 undergraduate marketing majors at UGA; more than 150 of them complete Program Requirements for the B.B.A. in marketing each year. Many UGA marketing graduates move directly into lucrative sales or management training programs; others go on to graduate programs, such as the Master of Marketing Research (M.M.R.), to prepare for academic or professional careers.

Entrance Requirements

Students accepted to Marketing must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> SPCM 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)	
<i>Preferred courses in Area E:</i> ECON 2100 or 2200 (take under general electives if not taken in Area E)	

Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
<u>Major Requirements:</u>	33
FINA 3000; MGMT 3000; MSIT 3000; MARK 3000, 4000, 4100, 4900	
Choose four of the following: MARK 4200, 4250, 4300, 4400, 4500, 4600, 4700, 4800 (The combination of MARK 4200 and MARK 4250 constitutes a Sales Sequence.)	
<u>Major Electives:</u>	3
Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000	
<u>General Electives:</u>	24
(Refer to College-wide requirements when selecting general electives.)	
(At least one course must be upper division)	
Five courses in Arts and Sciences	
One business course outside major	
Two courses outside department	
<i>Total hours required</i>	120

Scholarships

The department enjoys the support of several leading corporations in the form of scholarships to top marketing students and a high-level of interest in recruitment of marketing majors.

Internships

Many students choose to gain valuable work experience through internships. Students can receive academic credit for internships. The department keeps a book of companies that are interested in interns as well as a resume book that is sent to the companies. For more information, contact Robin Mladinich.

Marketing Education

Degree

Bachelor of Science in Education (B.S. Ed.)

Contact Person

Wanda Stitt-Gohdes
Undergraduate Coordinator
wls@uga.cc.uga.edu
(706) 542-4078

Department

Occupational Studies
College of Education

Description of the Program

The marketing education program prepares individuals to teach a cluster of marketing and marketing-related courses in public secondary and postsecondary institutions. Majors enroll in a

cross-section of courses in marketing and management offered by the Terry College of Business as well as marketing education and professional education courses from the College of Education. Additional opportunities for marketing internships and occupational updates in business and industry are provided for majors in marketing education.

Career Opportunities

Students are prepared as teachers for grades 7-12 and post-secondary technical institutes. These educational experiences also enhance the ability of the marketing education major to seek other positions in both the public and private sectors related to the areas of training and development and marketing management.

Expectations of Transfer Students

Recommended courses for transfer students include accounting, business law, economic, psychology, and computer technology.

Special Requirements

A 2.5 GPA is required for admission to teacher education. Appropriate occupational experience in marketing is required for teacher certification.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
ACCT 2101, 2102; EFND 2030; EPSY 2020; MGMT 2090; three hours of electives	
<u>Major Requirements:</u>	29
EMKT 5460; EOCS 2450, 3010, 3450, 4350, 4360, 5030, 5450, 5550	
<u>Major Electives:</u>	18
EMKT 4100, 4110, 4120; LEGL 2700; MARK 3000; MGMT 3000	
<u>General Electives:</u>	13
Any level	
<i>Total hours required</i>	120

Internships and Cooperative Education

Supervised observations and participation in cooperating schools are required for all students. Full-time student teaching is required for certification.

Mathematics

Degree

Bachelor of Arts (A.B.), Bachelor of Science (B.S.)

Contact Person

Malcolm R. Adams
Associate Department Head
adams@alpha.math.uga.edu
(706) 542-2211

Department

Mathematics
College of Arts and Sciences

Description of the Program

The Mathematics major at the University of Georgia is demanding yet versatile. The skills emphasized by this major include problem solving and analysis, mathematical modeling, and abstract conceptual thinking. The importance of these skills is recognized in the variety of career opportunities available to the mathematics major. The mathematics major is sometimes used as a stepping stone to professional schools such as law, business, or medicine; it can lead to applied careers in actuarial sciences, computer modeling and applications, and optimization and control theory; it can lead to academic positions, from high school teacher to college professor. Mathematics classes are generally small, offering students a great amount of personal attention. State-of-the-art computer labs are available to mathematics students. And finally, an active Math Club offers students opportunities to interact with each other, graduate students, and faculty. Visit our Web Page at <http://www.math.uga.edu/> for further information.

Career Opportunities

Some of our recent graduates have gone on to doctoral work at various top-ranked universities while others have chosen careers in industry. Some employers who have hired recent mathematics majors are: Arthur Anderson, C&S Bank, Delta Airlines, Hansen Inc., NASA, National Security Agency, Southern Bell, and the U.S. Navy.

Expectations of Transfer Students

Students are ordinarily expected to have completed the calculus sequence (through MATH 2500), Introduction to Linear Algebra (MATH 3000), Sequences and Series (MATH 3100), and Elementary Differential Equations (MATH 2700) before beginning their junior-year course work. Earliest possible completion of Introduction to Higher Mathematics (MATH 3200) will facilitate the timely fulfillment of major requirements. Mathematics majors are encouraged to take Introductory Physics for Science and Engineering Students—Mechanics, Waves, Thermodynamics

(PHYS 1211-1211L) and Introductory Physics for Science and Engineering Students—Electricity and Magnetism, Optics, Modern Physics (PHYS 1212-1212L), as well as Introduction to Computing and Programming (CSCI 1301-1301L).

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: MATH 2200, 2200L and two of the following: PHYS 1211-1211L, 1212-1212L, and CSCI 1301-1301L (take under general electives if not taken in Area D)

Area F:

Choose two courses from MATH 2210, 2210L, 2500, 2700

Choose two courses from the following which have not been taken in Area D: PHYS 1211-1211L, 1212-1212L; CSCI 1301-1301L, 1302, 2670, 2720

Choose one course from PHIL 2500; any Biological Science course approved for Area D; any Chemistry course approved for Area D at or above the level of CHEM 1211; any 2nd, 3rd, or 4th semester foreign language courses; any 1st semester foreign language course not studied in high school

Major Requirements:

MATH 4000

Choose one course from MATH 4100, 4150, 4250

Six additional 3-hour MATH courses at the 3000 level or above

General Electives:

(Refer to College-wide requirements when selecting general electives.)

Upper division (15 hours)

Any level (21 hours)

Total hours required

Scholarships

The Strahan Award is a scholarship awarded to the outstanding junior majoring in mathematics.

Minor in Mathematics

Contact the department for requirements.

Hours

42

18

24

36

120

Mathematics Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Persons

Larry Hatfield

Department Head

lhatfiel@coe.uga.edu

(706) 542-4194

Heide Wiegel

Undergraduate Coordinator

hwiegel@coe.uga.edu

(706) 542-4194

Department

Mathematics Education

College of Education

Description of the Program

This program prepares students to teach mathematics in secondary schools.

Career Opportunities

Apart from preparing students to teach mathematics in Georgia, grades 7-12, the program prepares students for graduate studies in mathematics and for careers that call for mathematics, computer science, and interpersonal skills.

Entrance Requirements

Students entering this major must have either 1) completed 1-30 semester hours with a GPA of 2.2, MATH 2200- 2200L or equivalent with C or better or in progress; or 2) have completed 31 or more semester hours with a cumulative GPA of 2.5; and MATH 2200, 2200L or equivalent with C or better.

Expectations of Transfer Students

Students transferring into Mathematics Education at the beginning of their junior year should have completed all core requirements, including the calculus sequence MATH 2200, 2200L, 2210, 2210L. An overall GPA of 2.5 is required.

Special Requirements

A minimum grade of C is required in each mathematics course, in each education course, and in requirements for admission to Teacher Education.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: MATH 2200, 2200L

Area F:

2000-level EMAT course; EPSY 2020; SPED 2000; MATH 2210, 2210L or eight to ten hours of 1000/2000-level

Hours

42

18

courses from the following: ASTR, CSCI, EMAT, MATH, PHYS, SPCM, STAT	
Major Requirements:	30
EMAT 3450, 3500, 4360, 4500, 4680, 4950, 5360, 5460	
Major Electives:	24
MATH 3000; five MATH 3100 or above including geometry and modern algebra components; three hours of an elective in STAT; three hours of an elective in EMAT or MATH or STAT	
General Electives:	6
MATH 1101, if not already taken, or an elective	
Three hours of an elective	
Total hours required	120

Microbiology

Degree

Bachelor of Science (B.S.)

Contact Person

J. W. Fitzgerald

Professor

fitz@uga.cc.uga.edu

(706) 542-4115

Department

Microbiology

College of Arts and Sciences

Description of the Program

The Department of Microbiology offers courses of instruction in general microbiology, procaryotic biology, pathogenic microbiology, bacterial genetics, medical mycology, environmental microbiology, and biotechnology. Although a laboratory experience is included with some of these courses, the department also provides the opportunity for a student to take intensive laboratory courses that deal primarily with the research aspects of the discipline.

Career Opportunities

A major in microbiology represents a suitable program of study for graduate school in a number of related disciplines such as Biochemistry or Molecular Biology. The major is especially suitable for pre-medical, pre-dental, and pre-veterinary students. Positions as laboratory technicians are also available to graduated majors in academia, industry, and government.

Entrance Requirements and Expectations of Transfer Students

The initial courses in microbiology are MIBO 3500 and MIBO 3510L. It is recommended that these courses be taken at this University, preferably in the first semester of the junior year. Introductory

microbiology courses taken elsewhere are usually not accepted. Prerequisites are BIOL 1108-1108L and CHEM 2211. It is recommended that BCMB (BIOL) (CHEM) 3100 be taken prior to, or concurrently with, MIBO 3500. There are no placement examinations or mandatory co-curricular activities.

Fees

Fee cards for MIBO 3510L and 4700-4700L must be purchased at the bookstore. The current cost is about \$18.00 per card.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 2211, 2211L, and either of the following lab science sequences (the other sequence to be taken in Area F): CHEM 1211, 1211L and 1212, 1212L or BIOL 1107-1107L and 1108-1108L

Area F:

18

Either of the lab science sequences not taken in Area D; MATH 2200, 2200L; Foreign Language (2nd & 3rd semesters)

Major Requirements:

26-28

BCMB(BIOL)(CHEM) 3100; GENE (BIOL) 3204; MIBO 3500, 3510L, 4090

Choose one of the following: MIBO 4400L, 4600L, 4700-4700L, 4800L, 4900L

Choose one of the following: MIBO 4220, 4300; MARS(MIBO) 4620-4620L

Choose one of the following: CBIO (MIBO) 4100; MIBO 4220, 4300, 4400L, 4600L, 4700-4700L, 4800L, 4900L, or MARS (MIBO) 4620-4620L

Choose one three-hour course from the following: Any 3000- or 4000-level course in MIBO, BIOL, BCMB, CBIO, BTNY, MARS, ECOL, or GENE, or FDST (MIBO) 4030-4030L, 4120-4120L; FDST (EHSC)(MIBO) 4310-4310L, 4320-4320L; CRSS (MIBO) 4610-4610L

Major Electives:

18-19

PHYS 1111-1111L and 1112-1112L or 1211-1211L and 1212-1212L; CHEM 2212, 2212L

Choose one of the following: CSCI 1210; MATH 2210, 2210L; STAT 2000

Choose three hours of electives from philosophy, literature, religion, or fine arts

General Electives:	13-16
(Refer to College-wide requirements when selecting general electives.)	
Upper division (11-13 hours)	
Any level (0-5 hours)	
Total hours required	120

Middle School Education

Degree
Bachelor of Science in Education (B.S.Ed.)
Contact Person
Joyce Brown
Academic Advisor
jcbrown@uga.cc.uga.edu
(706)542-4244
Department
Elementary Education
College of Education

Description of the Program

The Middle School Education program has two cohorts starting each fall semester. Each cohort is limited to 22 students, for a total of 44 students entering the program each year. Each cohort consists of four semesters of course work, including one semester of student teaching. Only students who have met the entrance requirements are eligible to apply to the program. Applicants must apply for a specific fall semester (e.g., the 1999 fall semester). Contact the Elementary Education Department for an application and deadlines.

Career Opportunities

An individual with a teaching certificate in middle grades education is licensed to teach all subjects offered in grades 4-8.

Entrance Requirements

To be considered for admission to the program in Middle School Education, a student must have completed Areas A-F of the core curriculum; have an overall GPA of 2.75; have a passing score on the Praxis I (by test score or exemption); have completed 50 hours of pre-professional experience; and have submitted a satisfactory essay to the Middle School Education Admissions Committee.

Expectations of Transfer Students

Students are encouraged to contact the academic advisor for specific transfer information.

Program Requirements

Semester Core Curriculum	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	

Area F:	18
EDIT 2000; EFND 2030; EPSY 2020; SPED 2000	
Elective—3 hours in Specialization Area I and 3 hours in Specialization Area II as determined by Specialization Area; CHEM 1110 (Science), 3-hour ENGL elective (Language Arts), Social Science elective (Social Science), or MATH 2200, 2200L (Mathematics)	
Major Requirements:	59-60
EDMS 5020, 5030, 5460 (15 hours); ELAN 5200; READ 3530	
Choose one Specialization I and one Specialization II in different areas	
Language Arts Specialization I	
ELAN 5210, 5220; 12 hours of electives (must include one American Literature course 3000-level or above). Other electives may be selected from ENGL 3000-level or above, CLAS, CMLT 3000-level or above, DRAM, ELAN, JOUR, LING, READ, or SPCM	
Mathematics Specialization I	
EMAT 5280, 5290, 5310, 5320; MATH 5020, 5030	
Science Specialization I	
Four-hour CHEM elective approved by Middle School Education advisor; ENTO 5730-5730L; ESCI 4430, 4440; GEOL 4750	
Social Science Specialization I	
ESOC 4400; choose 15 hours of Social Science electives from ESOC 4150, 5010, 5520; HIST 3000-level or above	
Language Arts Specialization II	
ELAN 5210, 5220; 9 hours of electives (must include one American Literature course 3000-level or above). Other electives may be selected from ENGL 3000-level or above, CLAS, CMLT 3000-level or above, DRAM, ELAN, JOUR, LING, READ, or SPCM.	
Mathematics Specialization II	
MATH 5020, 5030; EMAT 5280, 5290, 5320	
Science Specialization II	
Four-hour CHEM elective approved by Middle School Education advisor, ESCI 4430, 4440; GEOL 4750	
Social Science Specialization II	
ESOC 4400; choose 12 hours of Social Science electives from ESOC 4150, 5010, 5520; HIST 3000-level or above	
General Electives:	0-1
Any level	
Total hours required	120

Music

Degree

Bachelor of Arts (A.B.)

Contact Person

Suzanne Caruso

Degree Program Assistant

Undergraduate Office

scaruso@rameau.music.uga.edu

(706)542-2764

Department

School of Music

College of Arts and Sciences

Description of the Program

The Bachelor of Arts degree with a major in Music is designed to allow students to study music without the focus of a particular professional major. The program is structured to provide a strong emphasis in applied music, theory, and music literature with a broad block of general education studies. The degree provides a foundation for professional pursuits in music and prepares the student to enter graduate study in music or other disciplines which accept a general liberal arts degree for entry. The degree is also useful for those who plan to pursue a career which requires a liberal arts education but no specific vocational training.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field following the completion of their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher. Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements, contact the School of Music Under-

graduate Office.

All music majors are required to take music theory. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester. The student pursuing an A.B. with a major in music may choose to perform a 15-minute minimum senior recital or to perform a jury in place of the recital.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: Six hours from RELI 2004, RELI(AFAM) 2005, or ENGL 2400

Preferred courses in Area D: GEOL 1121-1121L, 1122-1122L

Preferred course in Area E: ANTH 1102

Area F:

18

MUSI 1100, 1110, 1120, 1130, 2500, 2810, 2820; choose four 2000-level courses from Performing Organizations

Major Requirements:

19-23

MUSI 2120, 2130, 3210, 3220, 3240, 3910, 4810, 4820, 5910; choose four 3000-level (or higher) courses from Performing Organizations

Major Electives:

12-14

MUSI 2100, 2110, 2520, 2820; one 4000-level Music Theory elective; one 4000-level Music History elective

General Electives:

23-29

(Refer to College-wide requirements when selecting general electives.)

Upper division (21-25 hours)

Any level (0-6 hours)

Total hours required

120

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) Recitals: All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee.
- 2) Recital Cards: Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music sponsored and band sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office: (706) 542-2764.

Minor in Music

Contact the department for requirements.

Music Composition

Degree

Bachelor of Music (B.Mus.)

Contact Person

Suzanne Caruso
Degree Program Assistant
Undergraduate Office
scaruso@rameau.music.uga.edu
(706) 542-2764

Dr. Lewis Nielson
Chair of Music Theory and Music Composition
lnielson@uga.cc.uga.edu
(706) 542-2765

Department

School of Music
College of Arts and Sciences

Description of the Program

The Bachelor of Music with a major in Composition is designed to prepare the student to begin

professional work or to pursue graduate study. The program provides three years of applied study on a major instrument, as well as three years of intensive study in composition, during which the student participates in weekly seminars that focus on the analysis of contemporary music and evaluation of student compositions. The program includes a strong foundation in theory and music literature along with applied study on a secondary instrument. Performance of contemporary music is emphasized. The senior recital requires a multi-movement or large-form composition for an ensemble.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field after completing their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher. Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements, contact the School of Music Undergraduate Office, (706) 542-2764.

All music majors are required to take music theory. Freshman music majors begin their music theory study in the first semester of the freshman year. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester. Composition majors give recitals in both their instrument or voice applied lessons and in composition.

Students are expected to earn grades of B or better in all theory and ear training classes in order both to be admitted and to be retained in the composition program. *Note:* Conditional acceptance into/rejection from the composition program will be made at the end of the first semester of the sophomore year; only the instructor is responsible for this decision, unless he or she wishes to have additional opinions from the rest of the composition faculty.

Full acceptance is granted at the end of the sophomore year; this requires a jury before the full composition faculty with selected works written during the sophomore year being presented. The jury to determine full acceptance will take place at the end of the second semester of the sophomore year.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
Choose 8 hours from MUSI 1100, 1110, 1120, 1130	
Choose 6 hours from MUSI 1810, 1820, 2410, 2500; MUSI 2510 or 2400	
Choose 4 hours from Performing Organizations	
<u>Major Requirements:</u>	44
<i>Applied Study: Composition</i>	
Choose 18 hours from MUSI 2810, 2820, 3810, 3820, 3910, 4810, 4820, 5910	
<i>Secondary Applied</i>	
Choose 8 hours from MUSI 2810, 2820, 3810, 3820, 3910	
<i>Music Theory/Ear Training</i>	
MUSI 2110, 2120, 2130, 3240; three hours of Music Theory electives	
<i>Music History</i>	
MUSI 3210, 3220; three hours of Music History electives	
<u>Major Electives:</u>	14

Four hours of Performing Organizations; four hours of Ensembles; three hours of Conducting; three hours of a foreign language (third semester)

<u>General Electives:</u>	2
<i>Total hours required</i>	120

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) **Recitals:** All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee. Contact the Music Office for more information.
- 2) **Recital Cards:** Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music sponsored and band sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office: (706) 542-2764.

Music Education

Degree
Bachelor of Music (B.Mus.)
Contact Person
Suzanne Caruso
Degree Program Assistant
Undergraduate Office
scaruso@rameau.music.uga.edu
(706) 542-2764
Dr. Harriet Hair
Chair of Music Education
hhairmus@uga.cc.uga.edu
(706) 542-2755
Department
School of Music
College of Arts and Sciences

Description of the Program

The program of study leading to the degree Bachelor of Music with a major in Music Education is designed for the student preparing for a career in teaching. Students completing the program are recommended for certification to teach music in the public school systems of Georgia. The program is comprehensively structured to allow for continued study at the graduate level. In accordance with state certification requirements, students may elect to pursue one of four programs of study: Choral Music Education with a concentration in voice, Choral Music Education with a concentration in piano, Instrumental Music Education with a concentration in piano, or Instrumental Music Education with a concentration in a band or orchestral instrument. With additional study the degree may be earned with more than one emphasis.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field following the completion of their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher. Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements, contact the School of Music Undergraduate Office, (706) 542-2764.

All music majors are required to take music theory. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School

of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester.

Music majors interested in pursuing a major in Music Education must take a Music Education Interview with the Music Education faculty at the end of the freshman year. A grade point average of 2.5 or better is required for this major.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
MUSI 1100, 1110, 1120, 1130	
Choose 6 hours from MUSI 1810, 1820, 2410, 2500; MUSI 2510 or 2400	
Choose 4 hours from Performing Organizations	
<u>Major Requirements:</u>	58
<i>Applied Study</i>	
Choose 10 hours from MUSI 2810, 2820, 3810, 3820, 3910, 4810, 5910	
<i>Music Theory/Ear Training</i>	
Choose 9 hours from MUSI 2100, 2110, 2120, 2130, 3240	
<i>Music History</i>	
MUSI 3210, 3220	
<i>Music Education</i>	
Choose 13 hours from MUSI 3110 and 3120; MUSI 3130 and 3140 or 3150 and 3160; MUSI 5450; two hours of Music Education electives	
<i>Instrumental/Vocal Methods</i>	
MUSI 3400, 3410, 3420, 3430, 3440	
<i>Practicum and Student Teaching</i>	
EMUS 5460 (13 hours)	
<u>Major Electives:</u>	9

Two hours of Performing Organization electives (required to register for all three semesters post-sophomore year); one hour of Ensemble elective; three hours of Conducting electives; three hours of foreign language (third semester)

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) Recitals: All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee. Contact the Music Office for more information.
- 2) Recital Cards: Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music-sponsored and band-sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office, (706) 542-2764.

Music Performance

Degree

Bachelor of Music (B.Mus.)

Contact Person

Suzanne Caruso

Degree Program Assistant

Undergraduate Office

scaruso@rameau.music.uga.edu

(706) 542-2764

Department

School of Music

College of Arts and Sciences

Description of the Program

The program of study leading to the degree Bachelor of Music with a major in Performance is designed for the student preparing for a career as a professional performer, a studio teacher, or a college professor. The curriculum for the degree is designed to develop a strong foundation in music history, music theory, and performance, and to

insure flexibility for continued study at the graduate level. The degree provides for maximum development of individual musicianship and the various competencies necessary to the contemporary performer. The student has numerous opportunities to perform including required junior and senior solo recitals.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field following the completion of their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher. Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements contact the School of Music Undergraduate Office, (706) 542-2764.

All music majors are required to take music theory. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each

semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester.

Music majors interested in pursuing a major in Performance must be admitted by the appropriate area faculty following the second semester jury of the freshman year.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
<i>Required courses in Area A: ENGL 1101, 1102, and MATH 1101</i>	
Area F:	18
Choose 8 hours from MUSI 1100, 1110, 1120, 1130	
Choose 6 hours from MUSI 1810, 1820, 2410, 2500; MUSI 2510 or 2400	
Choose 4 courses in Performing Organizations	
<u>Major Requirements:</u>	38
<i>Applied Study: Primary instrument or voice</i>	
Choose 20 hours from MUSI 2810, 2820, 3810, 3820, 3910, 4810, 4820, 5910	
<i>Music Theory/Ear Training</i>	
MUSI 2110, 2120, 2130, 3240; three hours of Music Theory electives	
<i>Music History</i>	
MUSI 3210, 3220; three hours of Music History electives	
<u>Major Electives:</u>	14
Four hours of Performing Organizations electives; four hours of Ensembles electives; three hours of Conducting electives; three hours of foreign language (third semester)	
<u>General Electives:</u>	8
(May include second semester of foreign language)	
<i>Total hours required</i>	120

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) Recitals: All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee. Contact the Music Office for more information.
- 2) Recital Cards: Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music-sponsored and band-sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office: 706) 542-2764.

Music Theory

Degree

Bachelor of Music (B.Mus.)

Contact Person

Suzanne Caruso
Degree Program Assistant
Undergraduate Office
scaruso@rameau.music.uga.edu
(706) 542-2764

Dr. Lewis Nielson
Chair of Music Theory and Music Composition
lnielson@uga.cc.uga.edu
(706) 542-2765

Department

School of Music
College of Arts and Sciences

Description of the Program

The program of study leading to the degree Bachelor of Music with a major in Music Theory is designed to prepare the student for graduate studies in research-oriented degrees. The curriculum is structured to give a strong foundation in the academic study of music theory with concentrations in music history, performance, and an introduction to composition. The course of study in music theory includes the areas of form and analysis, counterpoint, and compositional techniques, and culminates in a research project which demonstrates the student's knowledge and abilities in the field.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field following the completion of their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of

further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher. Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements, contact the School of Music Undergraduate Office, (706) 542-2764.

All music majors are required to take music theory. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester.

Music majors interested in pursuing a major in Music Theory must take a Music Theory Interview with the Music Theory faculty at the end of the freshman year.

Program Requirements

<u>Semester Core Curriculum</u>	<u>Hours</u>
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A: ENGL 1101, 1102, and MATH 1101</i>	

Area F:
MUSI 1100, 1110, 1120, 1130
Choose 6 hours from MUSI 1810, 1820, 2410, 2500; MUSI 2510 or 2400
Choose 4 hours from Performing Organizations

Major Requirements:

Applied Study: Instrument or voice
Choose 12 hours from MUSI 2810, 2820, 3810, 3910, 4810, 4820, 5910; four hours of Composition electives

Music Theory/Ear Training
Choose 6 hours from MUSI 2110, 2120, 2130, 3240; four 3-hour Music Theory electives, two hours of thesis

Music History
MUSI 3210, 3220; three hours of Music History electives

Major Electives:

Four hours of Performing Organizations; four hours of Ensembles; three hours of Conducting; three hours of a foreign language (third semester)

General Electives:

Total hours required

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) Recitals: All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee. Contact the Music Office for more information.
- 2) Recital Cards: Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music-sponsored and band-sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office, (706) 542-2764.

Music Therapy

Degree

Bachelor of Music (B.Mus.)

Contact Person

Suzanne Caruso

Degree Program Assistant

Undergraduate Office

scaruso@rameau.music.uga.edu

(706) 542-2764

Dr. Roy Grant

Chair of Music Therapy

rgrant@uga.cc.uga.edu

(706) 542-2801

Department

School of Music

College of Arts and Sciences

Description of the Program

The program of study leading to the degree Bachelor of Music with a major in Music Therapy prepares the student for a career in the use of music for the restoration, maintenance, or improvement of mental and/or physical health. The Music Therapy curriculum includes a strong emphasis in psychology and the social sciences. It is structured to provide a foundation in the scientific application of music in rehabilitative environments such as hospitals, retardation centers, and special education programs within the framework of the public school system. Students completing the degree program are eligible to become members of the National Registry of Music Therapists upon completion of a six-month internship in an approved Music Therapy Program.

Career Opportunities

Many jobs in the market today require skills that musicians inherently possess. Such skills as diligence, determination, and detail work are second-nature to most musicians because of the nature of musical study. Many music majors find jobs in the music field following the completion of their baccalaureate degree. Some music majors choose to attend graduate school in pursuit of further music studies. Other UGA music graduates go on to pursue degrees in fields outside of music such as law, business, medicine, or computer science.

Entrance Requirements and Expectations of Transfer Students

Admission to the School of Music is accomplished by successfully auditioning on a major instrument or voice. This applies to incoming freshmen as well as to transfer students. Students must be admitted into major-level study, which consists of private applied lessons at two credits or higher.

Auditions are scheduled through the Undergraduate Office of the School of Music and are evaluated by a faculty jury in the appropriate area of applied music. Students are expected to be prepared to play or sing representative works from their repertoire. For specific detailed audition requirements, contact the School of Music Undergraduate Office, (706) 542-2764.

All music majors are required to take music theory. Transfer students are required to take the Theory Diagnostic Exam offered prior to the beginning of every semester. Contact the Undergraduate Office of the School of Music for the exact date and location of the exam.

Music Major Checksheets listing all the Program Requirements are available in the Undergraduate Office in the School of Music. A School of Music Undergraduate Booklet is also available upon request from the Undergraduate Office. This booklet gives detailed information about the various music majors, music organizations, audition requirements, and scholarship information.

Special Requirements

Further requirements for all music majors include: 1) receiving a grade of C or better in all major courses; 2) passing a keyboard proficiency test; 3) participating in the performing organization appropriate to the major performance medium each semester (e.g., string majors participate in orchestra, voice majors participate in choral organizations, etc.); and 4) attendance and participation in a minimum number of recitals per semester.

Program Requirements

<u>Semester</u>	<u>Core Curriculum</u>	<u>Hours</u>
Areas A-E:		42
See Core Curriculum		
Required courses in Area A:	ENGL 1101, 1102, and MATH 1101	
Area F:		18
MUSI 1100, 1110, 1120, 1130		
Choose 6 hours from MUSI 1810, 1820, 2410, 2500; MUSI 2510 or 2400		
Choose 4 hours from Performing Organizations		
Major Requirements:		42
Applied Study		
Choose 12 hours from MUSI 2810, 2820, 3810, 3820, 3910, 4810, 4820, 5910		
Music Theory/Ear Training		
MUSI 2100, 2110, 2120, 2130, 3240		
Music History		
MUSI 3210, 3220		
Music Therapy		
MUSI 5400, 5410, 5420, 5430, 5440, 5450		
Major Electives:		18
Four hours of Performing Organization;		

four hours of Ensembles; three hours of Conducting; three hours of a foreign language (third semester); four hours from the following Instrumental/Vocal Methods: MUSI 3400, 3410, 3420, 3430, 3440

<u>General Electives:</u>	2
<i>Total hours required</i>	122

Fees

Music majors are required to pay for the following services. For more specific information on these items, students should contact the School of Music Office, (706) 542-3737.

- 1) Recitals: All students are required to pay a recording fee for every recital they perform. The length of the recital and the time of day of the program affect the cost of the recital fee. Contact the Music Office for more information.
- 2) Recital Cards: Music majors are required to attend a minimum number of recitals per semester and are required to purchase a recital card which will be presented and punched to record attendance at each recital on campus. The recital card lasts for one academic year. Recital cards are available from the Music Office.

Scholarships

Financial aid available through the School of Music includes both School of Music-sponsored and band-sponsored scholarships. These scholarships are renewable each year with a maximum contract length of four years as long as the student's level of achievement is satisfactory. One audition satisfies both the admission and scholarship consideration requirements. The School of Music and University Bands Scholarship applications and additional information on the application process are found in the Undergraduate Booklet, which may be obtained from the Undergraduate Office, (706) 542-2764.

Newspapers

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Ernest C. Hynds
Department Head
ehynds@uga.cc.uga.edu
(706) 542-5030

Department

Journalism
College of Journalism and Mass Communication

Description of the Program

This major is designed to help students prepare for careers in newspapers, news services, and other

employment areas which require expertise in information gathering, analysis of information, writing, and editing.

Career Opportunities

Newspaper graduates typically begin their careers as reporters, writers, copy editors, or layout and design specialists.

Entrance Requirements

Applications are accepted only from students who have met *minimum* requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.5, and English proficiency (recentered SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the college is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the College of Journalism and Mass Communication. A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching its decisions on how many students may be admitted each semester, the Admissions Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying.

Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication.

The deadline is 4:00 p.m. on Friday of the second full week of classes.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (includes one hour of PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts. No more than 32 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Newspapers major.

A grade of C or higher must be earned in any journalism and mass communication course, or any prerequisite to a course which counts toward satisfaction of requirements for the A.B.J. degree.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Preferred course in Area D: STAT 2000	
Preferred courses in Area E: ANTH 1102 or GEOG 1125-1125D	
Area F:	18
Six hours of a foreign language beyond CPC level	
ECON 2105 or 2106	
Choose 9 hours from anthropology, art, classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics	
Major Requirements:	30-32
JOUR 3310, 3410 or 3410H, 3510, 5300; JRLC 5040	
Choose 13 to 15 hours (4 to 5 courses) from the following (at least 6 hours must be in writing/editing courses): JOUR 3610, 3710, 5010, 5170, 5350, 5370, 5410, 5530, 5580, 5590, 5600, 5670, 5800, 5990; JRLC 5080, 5210, 5490	
Major Electives:	15
Choose 15 hours of upper division electives in no more than two disciplines other than	

journalism and mass communication, academic assistance, physical education, military, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

General Electives: 13-15

Choose 13 to 15 hours of courses at any level in any disciplines other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

Photojournalism Emphasis

Students seeking a photojournalism emphasis must take JOUR 3610, 3710, 5370, and one course from JOUR 5170, 5350, 5360, 5370, 5990

Total hours required 120

Fees

Some courses require the purchase of a supply card from the University bookstore.

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application in the spring semester that assures them of consideration for any of the scholarships for which they qualify for the coming academic year.

Internships

Students gain practical experience by serving internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Three semester credit hours may be earned for successful completion of an internship if:

1. Advance approval is received from the department. (A written request must be submitted that includes a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
3. The internship covers a minimum number of weeks of full-time employment as determined by the department.
4. During the semester of the internship the student registers concurrently for JOUR 5010, which is included in the maximum semester hours of journalism and mass communication credit which may be earned toward the Newspapers major.

5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Nutrition Science

Degree

Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.)

Contact Person

Dr. James Hargrove
Associate Professor
jhargrov@fcs.uga.edu
(706)542-4872

Department

Foods and Nutrition
College of Family and Consumer Sciences

Description of the Program

This major is designed to provide basic training in nutrition and related sciences. Students interested in research, college teaching, or administrative positions in nutrition will be prepared for graduate study with this major. Selection of appropriate electives permits adaptation of this major to the student's primary interest area. This major is an excellent preparation for entry into the various fields of medicine.

Career Opportunities

Nutrition Science majors pursue a range of careers due to their broad science training. They have excellent backgrounds for medical or dental school. Graduates may be employed by agricultural commodity groups; food and pharmaceutical manufacturers in research, development, public relations, or education sections. They find careers in government food or health agencies at the national, state, or local level. Agencies such as the Food and Drug Administration and Departments of Agriculture, Health and Human Resources, or Education also employ graduates of this major. Many positions in nutrition require graduate study.

Expectations of Transfer Students

Students who have completed two years of college work and are planning to transfer into this major are expected to have completed Biology 1107-1107L and 1108-1108L or the equivalent. In addition, it is crucial that the students have completed Freshman Chemistry 1211, 1211L and 1212, 1212L with a grade of C or better. Satisfactory

progress requires completion of Organic Chemistry 2211, 2211L prior to the end of fall semester during the junior year, in preparation for FDNS 3100.

Program Requirements

Semester Core Curriculum

Hours
42

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 1211, 1211L, 1212, 1212L, and STAT 2000

Preferred courses in Area E: ANTH 1102 and PSYC 1101

Area F:

18

BIOL 1107-1107L, 1108-1108L; CHEM 2211, 2211L; CHFD 2100 or HACE 2100; FDNS 2100

Major Requirements:

47-48

BCMB(BIOL)(CHEM) 3100; BCMB 4010, 4020; BCMB 4030L or BIOL 3110L; CBIO 2200-2200L or 3000-3000L; CBIO 2210-2210L; CSCI 1301-1301L; FDNS 2000, 2400, 3100, 4100, 4510, 4530, 4550; MATH 2200, 2200L

Major Electives:

12-13

Choose 12 to 13 hours from CBIO(BIOL) 3400; CBIO 4730; FDNS 4540, 4580, 4600, 4900, 5010; GENE(BIOL) 3204

Total hours required

120

Note: Pre-medical students who select this major must take either PHYS 1111-1111L and 1112-1112L or PHYS 1211-1211L and 1212-1212L. It is recommended that they take CBIO 3000-3000L and VPHY 3100 instead of CBIO 2200-2200L and 2210-2210L. To accommodate this modified plan, it is recommended that pre-medical students take only 17 hours of the electives in major electives.

Pharmacy

See Pre-Pharmacy on page 296 of this Bulletin, see the College of Pharmacy on page 82, or contact the College for a copy of the *College of Pharmacy Bulletin* for additional information on degree programs in Pharmacy.

Philosophy

Degree
Bachelor of Arts (A.B.)
Contact Person
Robert Burton
Undergraduate Coordinator
burton@arches.uga.edu
(706)542-2823
Department
Philosophy
College of Arts and Sciences

Description of the Program

The program of the department is designed to guide the student in the systematic investigation of such basic issues as the nature of reality, knowledge, value, and obligation. This involves studying the major figures of the western philosophical tradition and assessing the major options that have emerged. The student acquires the philosophical skills of inquiry, including critical thinking, the discovery and evaluation of basic assumptions, the analysis of concepts, the analysis of experience, and the construction and assessment of arguments.

Career Opportunities

The philosophy major develops analytic and critical thinking skills essential to all professions. The major program can be tailored for careers in law, business, education, and many other professions.

Entrance Requirements and Expectations of Transfer Students

Entrance to the major requires a 2.0 GPA and completion of Area F of the Core for Philosophy.

Special Requirements

Philosophy majors and minors should acquire an e-mail account and notify the department of his/her e-mail address.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E: See Core Curriculum	42
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Area F: PHIL 1000, 2200, 2500	18
Choose three 3-hour courses from HIST 2301, 2302, or courses in Art, African American Studies, Classics, Comparative Literature, Drama, English, Linguistics, Music, Philosophy, Religion, or Women's Studies	
Major Requirements: PHIL 3000, 3010	24

Minimum of six 3-hour courses with a PHIL prefix numbered 3000 or above
Major Electives: 3-15
Fourth semester of a foreign language
Take the following if not satisfied in the core: two courses in literature, PHIL 2200, 2500
General Electives: 21-33
(Refer to College-wide requirements when selecting general electives.)
Upper division (15 hours)
Any level (12-18 hours)
Total hours required 120
Minor in Philosophy
Contact the department for requirements.

Physics

Degree
Bachelor of Science (B.S.)
Contact Person
Jeffrey A. Templon
Undergraduate Academic Advisor
templon@hal.physast.uga.edu
(706)542-2843
Department
Physics and Astronomy
College of Arts and Sciences

Description of the Program

Physics is the study of how the universe works. Students majoring in physics will study the theories of classical mechanics, electricity and magnetism, and quantum mechanics. Practical applications of these theories are covered in other required courses such as Optics and Electronics. Throughout the course of study, emphasis is placed on using one's understanding of the theories to solve problems.

Career Opportunities

Physicists are trained to solve problems by thinking critically, logically, and systematically. A physicist can work effectively in any career which requires these skills. Some students continue in physics research and are ultimately employed in private or government research laboratories, or at universities. Other students go to graduate school in other fields, the most frequent choices being Computer Science, Engineering, Medicine, and Law. Many Ph.D. physicists are employed outside of physics, for example in computer-related professions, or as financial analysts, or in nuclear medicine.

Expectations of Transfer Students

Students intending to pursue a major in physics should begin calculus as soon as possible and at least by the second semester of their freshman year and complete it through MATH 2500. They

should begin the PHYS 1211-1211L, 1212-1212L sequence by the second semester of their freshman year. A grade of C or better in PHYS 1211-1211L, and 1212-1212L (or PHYS 1111-1111L and 1112-1112L) must be earned before a physics major enrolls in more advanced PHYS courses.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: CHEM 1211, 1211L, 1212, 1212L and MATH 2200, 2200L (take under general electives if not taken in Area D).

Area F: 18

PHYS 1211-1211L (or 1111-1111L), 1212-1212L (or 1112-1112L); MATH 2200, 2200L (if taken in Area D, select additional hours in mathematics, computer science, or chemistry); MATH 2210, 2210L, 2500

Major Requirements: 24

MATH 2700; PHYS 3320-3320L, 3330-3330L, 3700, 4101, 4201, 4300, 4701

Major Electives: 3

Choose one course from PHYS 4102, 4202, 4702

General Electives: 33

(Refer to College-wide requirements when selecting general electives.)

Upper division (15 hours)

Any level (18 hours)

Total hours required 120

Scholarships

The Hendren Memorial Scholarship is available to students in this major. A number of research opportunities also exist for undergraduate students, and many carry a stipend.

Physics and Astronomy

Degree

Bachelor of Science (B.S.)

Contact Person

J. Scott Shaw

Undergraduate Academic Advisor

jss@hal.physast.uga.edu

(706) 542-2485

Department

Physics and Astronomy

College of Arts and Sciences

Description of the Program

The Physics and Astronomy major combines the

fundamental study of physics with observational astronomy and astrophysics. Emphasis is placed on applying theory to current astronomical and astrophysical problems and on individual research

Career Opportunities

Career opportunities include employment in private and government laboratories, teaching, in planetaria, in the armed forces, or in teaching.

Expectations of Transfer Students

Students intending to pursue a major in physics and astronomy should begin calculus as soon as possible, at least by the second semester of their freshman year, and complete it through MATH 2500. They should complete the PHYS 1211-1211L, 1212-1212L and the ASTR 1010, 1010L; ASTR 1020, 1020L sequences before the first semester of their junior year. A physics and astronomy major must have a grade of C or better in PHYS 1211-1211L, and 1212-1212L (or PHYS 1111-1111L and 1112-1112L) before enrolling in more advanced PHYS courses and a grade of C or better in ASTR 1010 and ASTR 1020 (or ASTR 1110H and ASTR 1120H) before enrolling in more advanced ASTR courses.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: ASTR 1010, 1010L, 1020, 1020L and MATH 2200, 2200L (take under general electives if not taken in Area D).

Area F: 18

MATH 2200, 2200L, 2210, 2210L, 2500; PHYS 1211-1211L (1111-1111L with approval); PHYS 1212-1212L (1112-1112L with approval)

Major Requirements: 22

ASTR 3010, 4330; MATH 2700; PHYS 3700, 4101, 4201, 4701

Major Electives: 6

Choose two courses from the following:
ASTR 3020, 4010, 4020

General Electives: 32

(Refer to College-wide requirements when selecting general electives.)

Upper division (14 hours)

Any level (18 hours)

Recommended electives for students interested in graduate work: ASTR 3020, 4010, 4020; MATH 3000; PHYS 3900, 4102, 4202, 4702

Total hours required 120

Scholarships

The Hendren Memorial Scholarship is available to students in this major.

Plant Protection and Pest Management

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Katherine L. Stevenson

Assistant Professor and Undergraduate Coordinator
ks@arches.uga.edu

(706) 542-1239

Department

Plant Pathology

College of Agricultural and Environmental Sciences

Description of the Program

The plant protection and pest management major is designed to give the student multi disciplinary training essential for the recognition, management, and control of major plant pests, mainly disease organisms, insects, and weeds, with the minimum use of pesticides. Use of economics, computer science, and farm management is emphasized.

Career Opportunities

Graduates are specifically prepared for opportunities in agriculture and related industries as well as government agencies. The program is also flexible enough to prepare a student for continued study in advanced degree programs.

Expectations of Transfer Students

Transfer students should have taken either BIOL 1107-1107L and 1108-1108L or BTNY 1210-1210L and 1220-1220L as well as CHEM 1211, 1211L and 1212, 1212L.

Special Requirements

A grade of C or better is required in major courses.

Program Requirements

Semester Core Curriculum

Areas A-E:	42
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See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L or BTNY 1210-1210L; CHEM 1211, 1211L; and STAT 2000 or 2210

Area F:	18
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BIOL 1108-1108L or BTNY 1220-1220L; CHEM 1212, 1212L; PHYS 1111-1111L or 1211-1211L; select 6 or 7 hours from AAEC 2110; CSCI 1100-1100L; ECOL 1000-1000L; GEOG

1101-1101D, 1112, 1112L, 1125-1125D; HORT 2000

Major Requirements:

Select 18 hours from CRSS 3050-3050L, 4340-4340L, 4590-4590L; ENTO 3740-3740L; ENTO(CRSS) 4250-4250L; PATH 3530-3530L, 4280-4280L

Major Electives:

Select 27 hours from AAEC 2580; BCMB (BIOL)(CHEM) 3100; BTNY 3830-3830L; CHEM 2100, 2100L, 2211, 2211L; CRSS 2010-2010L; CRSS (ENTO) (PATH) 3500; CRSS (MIBO) 4610-4610L; CSCI 1100-1100L, 1301-1301L; MIBO 3500; PATH (ANTH) (BTNY) 3010; PATH 3830-3830L, 3910, 3990; PATH(BTNY) 4200-4200L; PGEN 3580-3580L

General Electives:

Upper division (0-15 hours)

Any level (0-15 hours)

Total hours required

Scholarships

Two departmental scholarships are offered annually. In addition, more than 100 competitive scholarships are available from the College of Agricultural and Environmental Sciences. For more information about college-wide scholarships, contact the Office of Academic Affairs in the College.

Internships

The department employs students on a part-time basis and also assists them in locating summer jobs and internships with agribusiness and the Cooperative Extension Service.

Political Science

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Arnold Fleischmann

Undergraduate Coordinator

polugrad@uga.cc.uga.edu

(706) 542-2057

Department

Political Science

College of Arts and Sciences

Description of the Program

Political Science offers students interested in developing a broader and deeper understanding of politics the opportunity to do so within a structured program of study. The faculty's interests cover most specialities within political science. A range of courses covers politics in the United States, other political systems, relations among nations,

important debates in political philosophy, legal and constitutional issues, research skills and other topics.

Career Opportunities

Like all good liberal arts majors, political science helps students develop their analytical and problem-solving abilities, as well as improve their written and oral communications skills. It provides excellent preparation for graduate education in law and public administration, as well as doctoral programs in political science. Political science is also a good foundation for careers in public service, campaign work, and various management positions in the private sector.

Entrance Requirements

The department maintains no grade point or similar requirement for admission to the major. All students must complete POLS 1101-1101D before taking advanced courses in Political Science.

Expectations of Transfer Students

Transfer students should have completed at least POLS 1101-1101D or equivalent, which is the prerequisite for all courses in the major. No more than 12 semester hours of transfer credit will be accepted for the major.

Special Requirements

No more than 6 hours taken at the 2000-level and no more than 12 hours in transfer credit may be counted toward the major.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: PHIL 1000, 1500, or 2200

Preferred courses in Area D: STAT 2000 or 2210

Preferred courses in Area E: ECON 2105 or 2106

Area F: 18

Completion or exemption through the third semester of one foreign language required. Courses in Economics, History, Sociology, Philosophy, Anthropology, Speech Communication, Statistics, Mathematics (1060 or 1113), and foreign languages recommended.

Major Requirements: 24

Twenty-four hours with at least six in each of the department's three fields (Theory and Method, American Studies, Global Studies). The last six hours may be taken

in any of the three fields or courses labeled "Special."

Theory and Method

POLS 3000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4150, 4190

American Studies

POLS 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4700, 4710, 4720, 4730, 4740, 4790

Global Studies

AFAM(POLS) 4200; POLS 3200, 3300, 4210, 4220, 4230, 4250, 4300, 4360, 4370, 4380, 4390, 4480, 4490

Special Courses

POLS 3600; POLS(SOCI) 3700; POLS 4900, 4960, 4990H, 5000; POLS(SOCI) 5500, 5510, 5520

General Electives: 36

(Refer to College-wide requirements when selecting general electives.)

Upper division (15 hours)

Any level (21 hours)

Total hours required 120

Internships

The department maintains information on the Governor's Intern Program, which is offered every academic term, and the Georgia Legislative Intern Program, which has positions during the spring semester, when the Georgia General Assembly holds its annual session. Other information on internships with government agencies, election campaigns, interest groups, private firms, and other organizations is available at Career Planning and Placement in Clark Howell Hall. All internships have specific upper-division courses as prerequisites and must be approved in advance (see the department's "Undergraduate Manual" for details).

Minor in Political Science

Contact the department for requirements.

Poultry Science

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Henry L. Marks
Department Head
hmarks@uga.cc.uga.edu
(706)542-1333

Department

Poultry Science
College of Agricultural and Environmental Sciences

Description of the Program

All students in the Department of Poultry Science are encouraged to obtain a well-rounded education

in the humanities and social sciences as well as the biological, chemical, and physical sciences. Students receive a minimum of 36 semester credit hours of poultry science dealing with production, management, breeding, nutrition, anatomy and physiology, processing, and diseases. To complete their program of study, poultry science students may elect additional courses in either agribusiness or science. Fundamental education in agricultural business, marketing, finance, and management prepares students for entering the dynamic poultry industry in a wide variety of positions. In-depth courses in biological and agricultural sciences prepare students who aspire to careers in teaching, research, and development for entering graduate or professional schools.

Career Opportunities

Poultry is Georgia's largest agricultural industry. The agribusiness complex related to poultry in Georgia is a multi-million dollar industry and is the largest employer in the agricultural sector. Students who major in poultry science have excellent opportunities for employment and career advancement.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area C: SPCM 1100 or 1500

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and 3 hours from CSCI 1100-1100L, 1210; MATH 2200, 2200L, 2210, 2210L; STAT 2000, 2210

Area F: 18

BIOL 1104-1104L or 1108-1108L; CHEM 1212, 1212L, 2100, 2100L; PHYS 1010; POUL 2020-2020L, 2040

Major Requirements: 29

AVMD 3730; MIBO 3500, 3510L; POUL 3600, 3710, 3720, 3750, 3790, 3800-3800L; POUL(FDST) 3860

Major Electives: 17-19

Select 17 to 19 hours from the following (11 hours must be upper division courses): AAEC 2110 or ACCT 1160; AAEC 2580, 3040, 3100, 3690, 3980 or 4980; ADSC 3400-3400L; BCMB(BIOL) (CHEM) 3100; CBIO 3000-3000L, 3700, 4730; CBIO(MIBO) 4100; CHEM 2212, 2212L; FDST 2010; MARK 3000; MGMT 3000; PGEN 3580-3580L; POUL 2040, 3910, 4330; STAT 2210

General Electives:

Any level (12-14 hours)

12-14

Total hours required

120

Scholarships

The following scholarships are available for Poultry Science majors: Mr. and Mrs. J. B. Gay Memorial Fund; Roy and Maye Durr Scholarship; Assist Scholarship Fund; Harrison Poultry Science Scholarship; Till M. Huston Scholarship; Charles M. Rose Memorial Scholarship (Graduate Student).

Internships

Internships are available but not required.

Minor in Poultry Science

Contact the department for requirements.

Pre-Professional Programs

See the Pre-Professional Programs section, page 295, for information on programs in Pre-Journalism, Pre-Law, Pre-Medicine, Pre-Dentistry, Pre-Optometry, Pre-Nursing, Pre-Pharmacy, Pre-Theology, and Pre-Veterinary Medicine.

Psychology

Degree

Bachelor of Science (B.S.)

Contact Person

Dr. Stuart Katz, Chair
Undergraduate Studies Committee
skatz@uga.cc.uga.edu
(706) 542-3039

Department

Department of Psychology
College of Arts and Sciences

Description of the Program

The major in psychology is designed to convey knowledge about the phenomena, laws, and theories of the mind, as well as the experimental methods necessary to acquire that knowledge.

Career Opportunities

Opportunities for graduates include college/university teaching and research; careers in industrial, government, and other organizational settings; careers in mental health settings; and other professional employment.

Entrance Requirements

Prospective Psychology majors must have the following three prerequisites for PSYC 2980 (the first course in the major): PSYC 1101, STAT 2000

(or MATH 2200), and BIOL 1103-1103L (or 1107-1107L) or Honors equivalents. The GPA for these three courses must be at least 2.3 with no grade lower than a C.

Expectations of Transfer Students

Transfer students must have certain prerequisites for the first course in the major (see Entrance Requirements). No courses transferred at the 2000 level or lower, except PSYC 2980 and PSYC 2990, can be used as credit toward the major.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area D: BIOL 1103-1103L or 1107-1107L, any other Lab science course, STAT 2000 or MATH 2200, 2200L (take under general electives if not taken in Area D)

Area F: 18

Choose 18 hours from the following:

PSYC 1101; BIOL 1103-1103L or 1107-1107L; STAT 2000

If the courses listed above were taken in Areas A-E, select remaining hours from the following: nine hours of foreign language (credit not permitted for first elementary course); PSYC 2100, 2101, 2520, 2530, 2540, 2560, 2570, or courses in social, behavioral, or biological sciences.

Major Requirements: 18

PSYC 2980; 2990

Choose one from Group A: PSYC 4100, 4110, 4120, 4130

Choose one from Group B: PSYC 4200, 4210, 4220, 4230

One additional core major course from Group A or B

Major Electives: 9

Select 9 hours from AFAM (PSYC) 4500, 4550; PSYC 3230, 3260, 3300, 3510, 3810, 4100, 4110, 4120, 4130, 4200, 4210, 4220, 4230, 4650, 4600, 4700, 4800, 4850, 4910, 4920, 4930, 5100, 5750, 5760, 5770, 5850

General Electives: 33

(Refer to College-wide requirements when selecting general electives.)

Upper division (18 hours)

Any level (15 hours)

Total hours required 120

Minor in Psychology

Contact the department for requirements.

Public Relations

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Dean M. Krugman

Department Head

dkrugman@uga.cc.uga.edu

(706) 542-4791

Department

Advertising and Public Relations

College of Journalism and Mass Communication

Description of the Program

This program is designed to train students as analysts, creative thinkers, writers, planners and policy makers in public relations.

Career Opportunities

Career opportunities include entry-level positions in public relations such as corporate relations, image management and other forms of mediated persuasion.

Entrance Requirements

Applications are accepted only from students who have met minimum requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.5, and English proficiency (recent SATV score of at least 650, ACTV score of at least 30, or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission. A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the College is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the College of Journalism and Mass Communication. A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching its decisions on how many students may be admitted each semester, the Admissions

Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying. Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication. The deadline is 4:00 p.m. on Friday of the second full week of classes.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (includes one hour PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts. No more than 31 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Public Relations major.

A grade of C or higher must be earned in any journalism and mass communication course or any prerequisite to a course which counts toward satisfaction of requirements for the A.B.J. degree.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area D: STAT 2000

Preferred courses in Area E: ANTH 1102 or GEOG 1125-1125D

Area F: 18

Six hours of a foreign language sequence beyond CPC level

ECON 2105 or 2106

Choose 9 hours from anthropology, art, classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics

Major Requirements:

ADPR 3520, 3850, 5910, 5920, 5950; JOUR 3410

Choose one course from the following: ADPR 3130; MARK 4100; POLS (SOCI) 3700; POLS 4700; SPCM 3700

Choose any three 3-hour courses in the college

Major Electives:

Choose 15 hours of upper division electives in no more than two disciplines other than journalism and mass communication, academic assistance, physical education, military, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

General Electives:

Choose 14 hours of courses at any level in any disciplines other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

Total hours required

31

15

14

120

Fees

Some courses require the purchase of a supply card from the University bookstore.

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application during the spring semester that assures them of consideration for any of the scholarships for which they qualify for the coming academic year.

Internships

Students gain practical experience by serving internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Three semester credit hours may be earned for successful completion of an internship if:

1. Advance approval is received from the student's department. (A written request must be submitted and include a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
3. The internship covers a minimum number of weeks of full-time employment as determined by the department.

4. During the semester of the internship the student registers concurrently for ADPR 5010, which is included in the maximum semester hours of journalism and mass communication credit toward the Public Relations major.
5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Publication Management

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Ernest C. Hynds
Department Head
ehynds@uga.cc.uga.edu
(706) 542-5030

Department

Journalism
College of Journalism and Mass Communication

Description of the Program

The publication management major is designed to help students prepare for careers in management at newspapers, magazines, or other print media.

Career Opportunities

Publication Management graduates typically begin their careers as reporters, writers, copy editors, layout and design specialists, or in beginning level management positions in business, advertising, or circulation departments of print media

Entrance Requirements

Applications are accepted only from students who have met *minimum* requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.5, and English proficiency (recentered SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the College is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the College of Journalism and Mass Communication. A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching its decisions on how many students may be admitted each semester, the Admissions Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying. Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication. The deadline is 4:00 p.m. on Friday of the second full week of classes.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (includes one hour PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts. No more than 32 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Publication Management major.

A grade of C or higher must be earned in any journalism and mass communication course or any prerequisite to such a course which counts toward satisfaction of requirements for the A.B.J. degree.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E: See Core Curriculum	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred course in Area D:</i> STAT 2000	
<i>Preferred courses in Area E:</i> ANTH 1102 or GEOG 1125-1125D	
Area F:	18
Foreign language sequence beyond CPC level	
Economics	
Choose 9 hours from anthropology, art, classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics	
<u>Major Requirements:</u>	32-33
JOUR 3310, 3410 or 3410H, 3510, 5640; JRLC 5040	
Choose 15 to 16 hours (4 to 5 courses) from the following (at least 6 hours must be in writing/editing courses): ADPR 3100; JOUR 3610, 3710, 5010, 5170, 5300, 5350, 5370, 5410, 5530, 5580, 5590, 5600, 5620, 5640, 5800, 5990; JRLC 5080, 5210, 5490	
<u>Major Electives:</u>	15
Choose 15 hours from the following: ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090, 3000; MARK 3000; MSIT 3000; STAT 4210	
<u>General Electives:</u>	13-15
Choose 13 to 15 hours of courses at any level in any disciplines other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.	
<i>Photojournalism Emphasis</i>	
Students seeking a photojournalism emphasis must take JOUR 3610, 3710, 5370, and one course from JOUR 5170, 5350, 5360, 5370, 5990	
Total hours required	120

Fees

Some courses require the purchase of a supply card from the University bookstore.

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application in the spring semester that assures them of

consideration for any of the scholarships for which they qualify for the coming academic year.

Internships

Students gain practical experience by serving internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Credit hours may be earned for successful completion of an internship if:

1. Advance approval is received from the department. (A written request must be submitted that includes a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
3. The internship covers a minimum number of weeks of full-time employment as determined by the department.
4. During the semester of the internship the student registers concurrently for JOUR 5010, which is included in the maximum semester hours of journalism and mass communication credit that may be earned for the Publication Management major.
5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Real Estate

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Judy Bolen
Administrative Coordinator
jbolen@cbaec.cba.uga.edu
(706) 542-8532

Department

Insurance, Legal Studies, Real Estate, and Management Science
Terry College of Business

Description of the Program

The major offers a background for students planning careers in real estate sales, leasing, management, or appraising. Real Estate is the study of site selection, acquisition (lease or purchase), management and disposition of real property.

Career Opportunities

Potential career positions include junior appraiser, lease negotiator, leasing agent, sales associate, and right of way agent.

Entrance Requirements

Students accepted to Real Estate must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Area A-E:	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> SPCM 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)	
<i>Preferred courses in Area E:</i> ECON 2100 or 2200 (take under general electives if not taken in Area E)	
Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
<u>Major Requirements:</u>	33
FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; REAL 4000, 5080, 5090; REAL(FINA) 5100	
Choose one of the following: REAL 5070; LEGL(REAL) 5200	

Choose six hours from the following: Any REAL course not counted elsewhere, including REAL 4800 (internship); any 4000- or 5000-level course (excluding 4800 internship courses) in ACCT, MGMT, ECON, MARK, FINA, MSIT, LEGL or RMIN

Major Electives: 3

Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000

General Electives: 24

(Refer to College-wide requirements when selecting general electives.)

(At least one course must be upper division)

Five courses in Arts and Sciences

One business course outside major

Two courses outside department

Total hours required 120

Fees

Voluntary membership in the Real Estate Society and inclusion in the resume book involves a small fee.

Scholarships

The Real Estate Society sponsors scholarships each semester.

Internships

Internships may be done for credit and are encouraged.

Recreation and Leisure Studies

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Douglas A. Kleiber
Department Head
dkleiber@uga.cc.uga.edu
(706) 542-5064

Department

Recreation and Leisure Studies
College of Education

Description of the Program

The Department of Recreation and Leisure Studies Undergraduate Program prepares students for positions in recreation, parks and leisure services. Students have the opportunity to specialize in one of three areas: administration of leisure services, recreation resource management, or therapeutic recreation. The program of study is generally divided into the general university core, major core courses, and emphasis area course work. All

students must complete practica, work experience and an internship related to the student's emphasis area.

Career Opportunities

Students in the Administration of Leisure Services emphasis area have career opportunities in the administration and management of park and recreation agencies, health and fitness, corporate recreation and other public, private, civic, and social agencies. Students in the Therapeutic Recreation emphasis area have career opportunities as Therapeutic Recreation Specialists in rehabilitation centers, long term care facilities, psychiatric facilities, senior centers and other community facilities. Students in the Recreation Resource Management emphasis area have career opportunities in national, state and county parks, nature centers, environmental education centers, and wildlife preserves as administrators, interpreters, environmental educators, park rangers or recreation planners.

Entrance Requirements and Expectations of Transfer Students

Students entering the program and transfer students must meet the current grade requirements for the College of Education and complete a departmental application.

Special Requirements

Students must meet the current grade point average requirements set by the College of Education.

Program Requirements

Semester Core Curriculum

Areas A-E:

Hours
42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred courses in Area C: ARTS 2050; CMLT 2400; DRAM 2130; ENGL 2400; RELI 2004; RELI (AFAM) 2005

Preferred courses in Area D: BIOL 1103-1103L and 1104-1104L (Therapeutic Recreation); CSCI 1100-1100L (Administration of Leisure Services); GEOG 1112, 1112L and 1113, 1113L or GEOL 1121, 1121L and 1122, 1122L (Recreation Resource Management), and STAT 2210

Preferred course in Area E: PSYC 1101 (take under general electives if not taken in Area E)

Area F:

18

CHFD 2100; HPRB 1710; MGMT 2090, 2090L; PSYC 1101; SOCI 1101 or 1600; SPCM 1100 or 1500

Major Requirements:

52-57

ENGL 3590 or JOUR 3410; RLST 2030, 2800, 2800L, 3450, 3850, 4870, 4890, 4900, 5700; RLST(FORS) 3310

Choose one of the following Options:

Option I: Administration of Leisure Services

ACCT 1160; FORS(RLST) 5400-5400L; MGMT 3000; RLST 5340

Option II: Recreation Resource Management

FORS(RLST) 5400-5400L; FORS 5410; RLST 4270, 4840

Option III: Therapeutic Recreation

CBIO 2200-2200L; PSYC 3230; RLST 4020, 4030, 4040

General Electives:

3-8

Any level

Total hours required

120

Scholarships

Scholarship information may be obtained from Leisure Careers Foundation, Georgia Recreation and Parks Association, 1285 Parker Road, Conyers, GA 30207-5957

Cooperative Education Programs

Cooperative Education Programs are available through the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers.

Religion

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Thomas B. Slater
Undergraduate Coordinator
tslater@uga.cc.uga.edu
(706)542-5356

Department

Religion
College of Arts and Sciences

Description of the Program

The major in religion provides a broad academic study of religion from a humanistic point of view. It covers the principal religions of the world, including Judaism, Christianity, Islam, Hinduism, Buddhism, Jainism, Taoism, Confucianism, and Shinto. In addition, it offers courses in African-American religion and native American religion, as well as programs in classical Hebrew and Arabic. Comparative studies are strongly encouraged, the major requiring course work in two or more areas of concentration. The program is located in the College of Arts and Sciences and plays an important role in the Humanities and the Social Sciences.

It treats religious studies as an educational matter only, having no doctrinal preference or denominational orientation. Its focus is on the historical, political, sociological, and philosophical aspects of religion.

Career Opportunities

Career opportunities for a major in religion encompass a broad range of professions, including religious ministry, teaching, law, business, government, and law enforcement. In addition, a major in religion provides a sound basis for doing graduate work in many other academic fields.

Expectations of Transfer Students

Transfer students may transfer two upper division courses in religion to apply toward the A.B.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
One course from RELI 1001, 1002, 1003, 2004; RELI (AFAM) 2005	
Choose five courses from Literature, History, Foreign Language (1st semester), Art, Drama, Music, Philosophy, Classics	
<u>Major Requirements:</u>	21
(All RELI courses must receive a grade of C or above to count toward major.)	
Choose one course from RELI (AFAM) 3000; RELI (HIST) 3150, or RELI 4001-4303	
Choose one course from RELI 3300 or 4400-4404	
Choose one course from RELI 4071, 4072, 4101, 4102, 4301, 4303, 4510, 4520, 4530, or RELI (PHIL) 4500	
Four other courses with RELI prefix	
<u>Major Electives:</u>	15
Foreign Language (2nd and 3rd semester) Electives	
<u>General Electives:</u>	24
(Refer to College-wide requirements when selecting general electives.)	
Upper division (18 hours)	
Any level (6 hours)	
<i>Total hours required</i>	120

Minor in Religion

Contact the department for requirements.

Risk Management and Insurance

Degree

Bachelor of Business Administration (B.B.A.)

Contact Person

Judy Bolen

Administrative Coordinator
jbolen@cbacc.cba.uga.edu

Department

Insurance, Legal Studies, Real Estate, and Management Science

Terry College of Business

Description of the Program

The major offers a unique program of study designed to give the student a broad understanding of the roles and functions of risk-bearing institutions, knowledge of basic principles necessary for adequately managing economic risk, and the opportunity for professional advancement in the field of risk management and insurance.

Career Opportunities

Potential career positions for the student with a major in risk management and insurance include risk analyst, risk manager, underwriter, employee benefits analyst, insurance administrator, claims adjuster, agent, and loss control specialist, to name a few.

Entrance Requirements

Students accepted to Risk Management and Insurance must meet the current minimum grade point average requirements for this major.

Expectations of Transfer Students and Students in this Major

Students who have completed two years of college work (60 semester hours), intending to pursue this major, are expected to have completed ENGL 1101, 1102, MATH 2200, 2200L, ACCT 2101, 2101L, 2102, MGMT 2090, 2090L, and MSIT 3000. These courses are prerequisites to required upper-division business courses listed under Major Requirements below.

Special Requirements

In addition to the UGA residence policy, BBA students must complete at least 30 semester hours as students in the Terry College. Students are also expected to complete all major courses in residence. In some cases, with departmental permission, a student may receive transfer credit for one major course.

Grades of 2.0 in the following are required for BBA degree certification: ENGL 1101 and 1102 combined, major courses, business cumulative GPA, and the UGA cumulative GPA.

Program Requirements	
Semester Core Curriculum	Hours
Area A-E:	42
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area C:</i> SPCM 1500 (take under general electives if not taken in Area C)	
<i>Preferred courses in Area D:</i> MATH 1113 or 2200, 2200L (take under general electives if not taken in Area D)	
<i>Preferred courses in Area E:</i> ECON 2100 or 2200 (take under general electives if not taken in Area E)	
Area F:	18
ACCT 2101, 2102; ECON 2105, 2106; LEGL 2700; MGMT 2090	
Major Requirements:	33
FINA 3000; MGMT 3000; MSIT 3000; MARK 3000; RMIN 4000, 5100, 5110, 5950	
Choose one of the following: RMIN 5510, 5530, 5540	
Choose six hours from the following: RMIN 4800, 5570; any other RMIN course not counted elsewhere; any 4000- or 5000-level course (excluding 4800 internship courses) in ACCT, MGMT, ECON, MARK, FINA, MSIT, LEGL, or REAL	
Major Electives:	3
Choose one of the following: ACCT 4000; FINA 4000; ECON 4000; MARK 4000; MGMT 4000; REAL 4000; RMIN 4000	
General Electives:	24
(Refer to College-wide requirements when selecting general electives.)	
(At least one course must be upper division)	
Five courses in Arts and Sciences	
One business course outside major	
Two courses outside department	
Total hours required	120

Fees
 Voluntary membership in the Insurance Society, Gamma Iota Sigma, and inclusion in the resume book involves a small fee.

Scholarships
 The Insurance Society and Gamma Iota Sigma sponsor scholarships each semester.

Internships
 Internships may be done for credit and are encouraged.

Romance Languages

Degree
 Bachelor of Arts (A.B.)

Contact Person
 Dr. Doris Kadish
 (706) 542-1075

Department
 Romance Languages
 College of Arts and Sciences

Description of the Program

Students majoring in Romance languages will take courses that combine the study of literature, language, culture, and linguistics, which will lead to a development of language proficiency and an understanding of the cultures of areas of the world where these languages are spoken.

Career Opportunities

Many students majoring in Romance Languages will become teachers or go on to graduate school, but proficiency in two foreign languages also helps majors find employment in the public and private sectors.

Entrance Requirements

A student continuing a language taken in high school must take either the language achievement test of the College Entrance Examination Board or the placement test administered by the University of Georgia Counseling and Testing Center. Students will be placed in the appropriate course on the basis of their scores and other pertinent information. The Advanced Placement examinations in Spanish and French Language and Literature may also be submitted for placement and possible credit.

Expectations of Transfer Students

For one of the two languages chosen, four beginning and intermediate semester language courses equivalent to UGA FREN/ITAL/PORT/SPAN 1001-2002 are required. Study abroad courses can be used to fulfill part or all of these prerequisites, upon permission of advisors in the department.

Special Requirements

A minimum grade of C is required in course work for this major.

No student may receive credit for any course which is a prerequisite to a course for which college credit has already been received. Exceptions may be made only by the head of the department.

Certain courses in the Department of Romance Languages are not open to native speakers of that language. A native speaker is defined as a

person who graduated from a secondary school in which the language of instruction was French, Italian, Portuguese, or Spanish.

Program Requirements

Semester Core Curriculum

Areas A-E: 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Area F: 18

2001 (in major and minor language); 2002 (in major and minor language); LING 2100; choose three hours from ARHI 2100; CLAS 1000, 1010, 1020; CMLT 2210, 2220; DRAM 2000, 2120; ENGL 2310, 2320, 2400; GEOG(ANTH) (CMLT) (HIST) (SOCI) 2100; HIST 2221, 2222, 2301, 2302, 2502; ITAL 2500, 2600; MUSI 2020; PHIL 1000; PORT 2600; RELI 1001, 1002, 1003, ROML 2550; SPAN 2550; WMST 1110, 2010; 1000/2000-level courses in another language; 1000/2000-level foreign language study abroad courses

Major Requirements: 30

(18 hours in major language; 12 hours in minor language)

Select Option I, II, or III

Option I: Select a major language, French or Spanish, and a minor language, Spanish or French

Major Language: French or Spanish
FREN/SPAN 3010, 3030; FREN(LING) 3090 or SPAN(LING) 3050; FREN/SPAN 4010; choose two courses from SPAN 4040; FREN/SPAN 4050, 4060, 4070, 4080, 4120, 4150; FREN(LING) 4630 or SPAN(LING) 4650

Minor Language: Spanish or French
FREN/SPAN 3010, 4010; choose two courses from SPAN 4040; FREN/SPAN 4050, 4060, 4070, 4080, 4120, 4150; FREN(LING) 4630 or SPAN(LING) 4650

Option II: Select a major language, Italian or Portuguese, and a minor language, French or Spanish

Major Language: Italian
ITAL 3010, 4010, 4050, 4060, 4070, 4120

Major Language: Portuguese
PORT 3010, 4010, 4050, 4060, 4070, 4080

Minor Language: French
FREN 3010, 3030, 4010; FREN(LING) 3090

Minor Language: Spanish
SPAN 3010, 3030, 4010, SPAN (LING) 3050

Option III: Select a major language, French or Spanish, and a minor language, Italian or Portuguese

Major Language: French
FREN 3010, 3030, 4010; FREN(LING) 3090; choose two courses from FREN 4050, 4060, 4070, 4080, 4120, 4150; FREN(LING) 4630

Major Language: Spanish
SPAN 3010, 3030, 4010; SPAN(LING) 3050; choose two courses from SPAN 4040, 4050, 4060, 4070, 4080, 4120, 4150; SPAN(LING) 4650

Minor Language: Italian
ITAL 3010, 4010; choose two courses from ITAL 4050, 4060, 4070, 4120

Minor Language: Portuguese
PORT 3010, 4010; choose two courses from PORT 4050, 4060, 4070, 4080

General Electives: 30
(Refer to College-wide requirements when selecting general electives.)

Upper division (9 hours)

Any level (21 hours)

Total hours required 120

Study Abroad

The Department of Romance Languages encourages all students to participate in an accredited study abroad program for an academic year, a semester, or the summer. Prior departmental approval is required for credit. Contact the Office of International Education (542-1557) for information about programs. Check with the department for the maximum number of hours that will count for a major or minor.

Minor in French, Italian, Portuguese, or Spanish

Contact the department for requirements.

Russian

Degree

Bachelor of Arts (A.B.)

Contact Person

Dr. Paul Popov
ppopov@uga.cc.uga.edu
(706)542-2442

Department

Germanic and Slavic Languages
College of Arts and Sciences

Description of the Program

The undergraduate program in Russian is designed to provide students with communicative proficiency in the Russian language and knowledge of important aspects of Russian culture.

Career Opportunities

Russian is the first language of approximately 150 million people and has long served as a lingua franca for millions more in the former republics of the Soviet Union and the countries of Eastern Europe. Russian continues to play an important role in global politics, and there is a wide variety of career opportunities in both governmental and non-governmental organizations with an international focus. Russia's reentry into the world economic system has also opened up a vast and largely unexploited market for Western goods and services, and business opportunities in the region can only increase over time. Furthermore, most large employers in the U.S. are international corporations which need employees who have the knowledge and experience to function successfully in foreign settings and to deal with their international business partners; foreign language majors are a definite asset to such companies.

Entrance Requirements

RUSS 2002 is a prerequisite for upper-division courses.

Expectations of Transfer Students

Students transferring as juniors should have completed four semesters of Russian study equivalent to UGA courses RUSS 1001-2002.

Special Requirements

Students must earn a minimum grade of C in each course. With permission of the department, up to six semester hours of upper-division transfer credit may be applied towards fulfillment of the major requirements; otherwise, all courses fulfilling the major requirements must be taken in residency.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E: See Core Curriculum <i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	42
Area F: RUSS 2001, 2002; LING 2100 Nine hours from the following areas: beginning/intermediate courses in a second foreign language, art, music, theater, literature, history, geography, anthropology, economics, international studies, linguistics, philosophy, communications and political science	18
<u>Major Requirements:</u> RUSS 3001, 3002, 4250 or 4260, 4270 Nine additional hours of RUSS courses from the following, including no more than one directed study course and no	21

more than one course in translation (RUSS 4050, 4060): RUSS 3000, 3001, 3002, 3200, 3990, 4001, 4050, 4060, 4250, 4260, 4270, 4510, 4960H, 4970H, 4990H

General Electives: 39

(Refer to College-wide requirements when selecting general electives.)

Upper division (18 hours)

Any level (18 hours)

Total hours required 120

Minor in Russian

Contact the department for requirements.

Science Education

Degree

Bachelor of Science in Education (B.S.Ed)

Contact Person

Thomas R. Koballa, Jr.
Department Head
tkoballa@coe.uga.edu
(706) 542-1763

Department

Science Education
College of Education

Description of the Program

This program prepares students to teach biology, chemistry, earth science, or physics in grades 7-12.

Career Opportunities

Students in this major prepare for careers as secondary/middle school science teachers.

Entrance Requirements

Students entering this major must have completed two years of core requirements or equivalent, must have 20 hours of experience in an education-based setting, must maintain an overall GPA of 2.5, and must complete an application and interview.

Expectations of Transfer Students

Transfer students must meet core requirements of the University of Georgia.

Special Requirements

Admission into the School of Teacher Education is required.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E: See Core Curriculum <i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1113 <i>Preferred courses in Area D:</i> CHEM 1211, 1211L, 1212, 1212L, and MATH 2200, 2200L	42

Area F:
EFND 2030; EPSY 2020; PHYS 1111-
1111L, 1112-1112L; SPED 2000

Major Requirements:

EDIT 2020; ESCI 3450, 4450, 4460, 4470,
5460, 5470, 5480

Major Electives:

Choose one of the following areas:

Biology

BCMB(BIOL)(CHEM) 3100; BIOL 1107-
1107L, 1108-1108L; CBIO(BIOL) 3300
or CBIO(BIOL) 3400; CHEM 2211;
ECOL(BIOL) 3500-3500L; GENE
(BIOL) 3204, 4604; 7 hours of Science
or Science Education electives (selected
with recommendation of advisor)

Chemistry

CHEM 2211, 2211L, 2212, 2212L, 3211,
3212, 3300, 3511L, 3512L; MATH 2210,
2210L; 2 hours of Science or Science
Education electives (selected with rec-
ommendation of advisor)

Earth Science

ASTR 1010, 1010L; GEOL 1121, 1121L,
1250-1250L, 1260-1260L, 2120, 3200,
4010-4010L; 7 hours of Science or Sci-
ence Education electives (selected with
recommendation of advisor)

Physics

GEOL 1250-1250L; MATH 2210, 2210L,
2500, 2700; PHYS 3320-3320L, 3330-
3330L, 4101, 4201, 4300; 2 hours of
Science or Science Education electives
(selected with recommendation of advi-
sor)

Total hours required

18

27

33

120

Social Science Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Renee Dobbs
Academic Advisor
rdobbs@uga.cc.uga.edu
(706) 542-7265

Department

Social Science Education
College of Education

Description of the Program

The program prepares teachers for social science/
social studies teaching positions in grades 7-12 and
meets Georgia Professional Standards Commis-
sion initial teacher certification requirements. Stu-
dents may choose to meet the requirements for the

following certification categories: broad field so-
cial sciences, history, geography, political science,
economics.

Career Opportunities

In social science/social studies education, the quan-
tity of teachers supplied exceeds the quantity
demanded, although in specific locales the imbalance
is larger or smaller. Because metropolitan and
suburban school systems are more attractive to
teacher candidates than small town and rural
school systems, job markets are more competitive
in urban areas. Opportunities in social science/
social studies education are related to academic
performance, general aptitude, character, person-
ality, job search strategies and effort, and willing-
ness to move to the location of job openings. Social
studies teachers who also can serve as coaches or
provide other services schools need compete bet-
ter in the current job market.

Entrance Requirements

To enter this major, students must have an overall
GPA of 2.5, field experience (ESOC 2450), and
must submit a video presentation and an essay.

Program Requirements

Semester Core Curriculum

Hours

Areas A-E:

42

See Core Curriculum

Required courses in Area A: ENGL 1101,
1102, and MATH 1101

Preferred courses in Area D: GEOG 1112,
1112L, 1113, 1113L, and STAT 2000

Preferred course in Area E: ANTH 1102

Area F:

18

EFND 2030; EPSY 2020; SPED 2000

Choose 9 hours from ANTH 1102; ECON
2105, 2106; GEOG 1101-1101D, HIST
2701, 2702; PSYC 1101; SOCI 1101

Major Requirements:

18

ESOC 2380, 2450, 4350, 4360, 4450,
5460 (9 hours)

Teaching Field:

24-30

Select either the Broad Field or Single
Discipline option:

Broad Field:

Thirty hours of courses (27 hours upper
division) selected from ANTH, ECON,
GEOG, HIST, POLS, PSYC, SOCI

The history and social science courses taken
in Major Requirements, Area E, and Area
F must equal 51 hours; at least 24 in the
major emphasis field (ECON, GEOG, HIST,
or POLS) and 9 hours each in three second-
ary emphasis fields (ECON, GEOG, HIST,
or POLS not chosen as the major emphasis
field).

Single Discipline:

Select a single discipline from Economics, Geography, History, or Political Science and complete the following:

Three hours of an upper division course in the single discipline

Twenty-one hours upper division courses selected from ANTH, ECON, GEOG, HIST, POLS, PSYC, and SOCI

The history and social science courses taken in Major Requirements, Area E, and Area F must equal 45 hours; at least 24 in the single discipline and 21 additional hours distributed in history and social science fields (ANTH, ECON, GEOG, HIST, POLS, PSYC, and SOCI).

General Electives: 12-18

Any level

Total hours required 120

Scholarships

The Hansing Scholarship is available to students in this major.

Social Work

Degree

Bachelor of Social Work (B.S.W.)

Contact person

Katheryn B. Davis
Director, Undergraduate Program
(706) 542-5425

Department

School of Social Work

Description of the Program

The Bachelor of Social Work degree is the first professional social work degree. This program of study prepares the student for beginning professional practice as a social worker. The liberal arts base combined with appropriate professional courses provide the fundamental knowledge and skill needed to assume the role of a beginning practitioner. The appropriate social work value and ethical base necessary for professional practice is also a central part of the curriculum. The student exits the B.S.W. program as a generalist in the field of social services.

Career Opportunities

Graduates holding a baccalaureate degree in social work will be prepared for practice in a wide variety of human service programs, for example, hospital social services, juvenile corrections, programs for the elderly, mental health and retardation centers, and child protective services. These are but a few of the settings in which social

workers provide clients with such services as counseling, problem solving, linkage with resources, case management, information, and referral.

Entrance Requirements

The academic program for students seeking the B.S.W. degree is composed of two parts: (1) Pre-professional enrollment for freshmen, sophomores, juniors and transfer students preparing for entry into the professional program; and, (2) the professional foundation program completed during the senior year.

Pre-professional enrollment is open to students meeting regular admission requirements at the University of Georgia. Admission to the professional foundation program occurs at the senior level. All students entering the professional foundation or senior year of study must have an overall and cumulative GPA of 2.5 and meet professional and liberal arts objectives of the program (see B.S.W. office for details). Prior to entering the professional program, all applicants must complete 50 clock hours of an advisor-approved human service experience. In addition, throughout the program student evaluations will determine the student's compatibility to the professional practice of social work.

Expectations of Transfer Students

Students who plan to transfer to the B.S.W. program, in addition to meeting the requirements for entry into the professional program outlined above, should plan to complete the following courses or their equivalents as determined by the B.S.W. program director: PSYC 4230, STAT 2000, CHFD 2100, one course in African American studies, one course in women's studies, and one course in information technology. Transfer students should also plan to take the following courses as part of their core requirements: foreign language through the third semester, BIOL 1104-1104L, SOWK 2154, PSYC 1101, and SOCI 1101.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
<i>Preferred courses in Area D:</i> BIOL 1103-1103L and STAT 2000 (take under general electives if not taken in Area D)	
<i>Preferred courses in Area E:</i> PSYC 1101; one course from AFAM or WMST and the preferred elective is one course in either SOCI or PSYC (take under general electives if not taken in Area E)	

Area F:	18
CHFD 2100; CSCI 1100-1100L; SOCI 1101 or 1600; SOWK 2101, 2154; one course in AFAM or WMST (if taken in Area E, take three hours of a foreign language)	
<u>Major Requirements:</u>	36
SOWK 5326, 5524, 5534, 5544, 5701, 5757, 5767, 5835, 5845	
<u>Major Electives:</u>	6-12
PSYC 4230; modern foreign language through third semester	
<u>General Electives:</u>	18
Any level (18 hours)	
<i>Total hours required</i>	126

Scholarships

The Heather Christina Wright Memorial Scholarship is available to qualified applicants. Selection is based on a desire and commitment to work with cancer patients and their families and financial need.

Sociology

Degree

Bachelor of Arts (A.B.)

Contact Person

Academic Director
klou@arches.uga.edu
(706) 542-3195

Department

Sociology
College of Arts and Sciences

Description of the Program

The major is designed to teach undergraduate students the sociological perspective, which has three central aspects. The first is the recognition of the preeminence of social structures and their influences, and of micro- and macro-level social processes. The second is the role of logic and of the scientific method in the acquisition of knowledge. The final aspect is the enduring link between the individual's experience and larger social processes.

In achieving its purpose, the sociology curriculum provides repeated experiences wherein students pose sociological questions and bring data to bear on them, making full use of computer technologies. Courses underscore the centrality of race, class, gender and culture in society and in sociological analysis. In the process, they expose students to comparative and international materials. More generally, the major develops student capacity for abstract thought, and for effective written and oral communication.

Career Opportunities

Sociology is a liberal-arts specialty that leads to a wide range of career options in government or business. In addition, a sociology major provides a solid foundation for further post-graduate study in law, business, and the social sciences.

Expectations of Transfer Students

Transfers into the major should have completed an introductory sociology course and STAT 2000. Students seeking credit for sociology courses taken at other colleges and universities must provide a syllabus for the course they wish to transfer and complete a *Request for Course Substitution/Prerequisite Waiver* form, obtained from the Academic Director's Office, Department of Sociology. No more than ten quarter hours or six semester hours of transfer credit will be applied toward requirements for the major.

Special Requirements

Sociology majors must complete Introductory Sociology (SOCI 1101) and STAT 2000. The statistics course is essential preparation for the rigorous methods requirement (SOCI 3600), which entails research design, data collection and data analysis. Sociology majors must also complete SOCI 3220 (Development of Sociological Theory), and six electives with a grade of C or better. Five of the six electives must be at the 3000 level or higher, and must be taken in residence.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
Choose 18 hours from AFAM 2000; ANTH 1102; CSCI 1100-1100L, 1210; ECON 2106, 2105, 2200; GEOG 1101-1101D, 1103-1103D, 1125-1125D; GEOG(ANTH) (CMLT) (HIST) (SOCI) 2100; HIST 2111, 2112, 2701, 2702; LING 2100; MATH 1060, 1113, 2200, 2200L, 2210, 2210L; PHIL 1000, 1500, 2200; POLS 1101-1101D; PSYC 1101, 2100; PSYC (AFAM) 2150; SOCI 1600; SOCI (AFAM) 2020, 2820; SOWK 2154; STAT 2000, 2210; WMST 1110, 2010	
<u>Major Requirements:</u>	27
SOCI 1101, 3220	
SOCI 3600 or 3590	
Minimum of five upper division electives	
One lower or upper division elective	

General Electives:	33
Upper division (15-18 hours)	
Any level (15-18 hours)	
Total hours required	120

Scholarships

The Phyllis Jenkins Barrow Scholarship is awarded annually to a major with senior status, UGA residence, and demonstrated academic performance. The Department also gives the Ray Payne Award to a major of senior status whose performance demonstrates commitment to sociology and a high potential for professional development in the discipline.

Study Abroad Programs

Juniors and seniors may study sociology for a semester or an academic year at the University of Leicester or the University of Lancaster in the United Kingdom. Students receive non-resident credit toward their degree at UGA and pay their normal UGA tuition. All costs of room and board, travel, and miscellaneous fees are borne by the student. Interested students should contact the Academic Director, Department of Sociology. The Sociology Department is also affiliated with the University of Georgia Summer Study Abroad Program in Verona, Italy. This program focuses on global environmental problems, and its courses provide resident credit. There is a set fee for this program that covers tuition, room and board, and travel. Interested students should contact the Academic Director.

Minor in Sociology

Contact the department for requirements.

Spanish

Degree
Bachelor of Arts (A.B.)
Contact Person
Dr. Doris Kadish
(706) 542-1075
Department
Romance Languages
College of Arts and Sciences

Description of the Program

Students majoring in Spanish will take courses that combine the study of literature, language, culture, and linguistics, which will lead to a development of language proficiency and an understanding of the Spanish-speaking world.

Career Opportunities

Many students majoring in Spanish will become teachers or go on to graduate school, but proficiency in a foreign language also helps majors find employment in the public and private sectors.

Entrance Requirements

A student continuing a language taken in high school must take either the language achievement test of the College Entrance Examination Board or the placement test administered by the University of Georgia Counseling and Testing Center. Students will be placed in the appropriate course on the basis of their scores and other pertinent information. The Advanced Placement examinations in Spanish Language and Literature may also be submitted for placement and possible credit.

Expectations of Transfer Students

Four semester courses or 14 semester hours of beginning and intermediate Spanish language course work, equivalent to UGA SPAN 1001-2002, are required. Study abroad courses can be used to fulfill part or all of these prerequisites, upon permission of advisors in the department.

Special Requirements

A minimum grade of C is required in course work for this major.

No student may receive credit for any course which is a prerequisite to a course for which college credit has already been received. Exceptions may be made only by the head of the department.

Certain courses in the Department of Romance Languages are not open to native speakers of that language. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was French, Italian, Portuguese, or Spanish.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A:</i> ENGL 1101, 1102, and MATH 1101	
Area F:	18
SPAN 2001, 2002; LING 2100; SPAN 2550 or ROML 2550	
Choose 6 hours from ARHI 2100; CLAS 1000, 1010, 1020; CMLT 2210, 2220; DRAM 2000, 2120; ENGL 2310, 2320, 2400; HIST 2221, 2222, 2301, 2302, 2502; ITAL 2500, 2600; MUSI 2020; PHIL 1000; PORT 2600; RELI 1001, 1002, 1003; SPAN 1001, 1002; WMST 1110, 2010; 1000/2000-level courses in	

another language; 1000/2000-level foreign language study abroad courses	
Major Requirements:	30
SPAN 3010, 3030, 4010, 4040, 4050, 4060, 4070; SPAN(LING) 3050	
Choose two courses from SPAN 4080, 4120, 4150; SPAN(LING) 4650	
General Electives:	30
(Refer to College-wide requirements when selecting general electives.)	
Upper division (9 hours)	
Any level (21 hours)	
Total hours required	120

Study Abroad

The Department of Romance Languages encourages all students to participate in an accredited study abroad program for an academic year, a semester, or the summer. Prior departmental approval is required for credit. Contact the Office of International Education (542-1557) for information about programs. Check with the department for the maximum number of hours that will count for a major or minor.

Minor in Spanish

Contact the department for requirements.

Special Education

Degree

Bachelor of Science in Education (B.S.Ed.)

Contact Person

Cheri Hoy
Department Head
cherihoy@uga.cc.uga.edu
(706) 542-4617

Department

Special Education
College of Education

Description of the Program

The undergraduate program in Special Education offers a Bachelor of Science in Education degree leading to initial state certification in interrelated. Students develop skills to work with individuals with mild intellectual and behavior disabilities. Students may choose to concentrate at the pre-school/elementary level or middle/high school level. Students are required to take at least two field-based practicums and 10 hours of student teaching. These supervised field experiences should help the student develop skills in working with the preschool through high-school age range.

Career Opportunities

Career opportunities include teaching in public or private schools and educational consultancy.

Entrance Requirements

A 2.7 overall grade point average is required for entrance to this major. Being accepted as a major in special education does not guarantee permission to enroll in our "majors only" courses. Faculty use the following procedures to select students to complete the last two years of the program: During the fall semester of each year, the special education faculty will select 30 students (sophomores and above) to progress into the last two years of the program. The 30 students will be selected based on a rank ordering of all students with over 15 hours. The rank order will be based equally on (1) overall grade point average and (2) date of matriculation at the University. Students are encouraged to bring a copy of their acceptance letter to their first advisement appointment with a special education faculty member. A copy of this letter will be kept in the student's departmental file and will be used to document the matriculation date. Students not selected to continue in the program will be advised to change majors. Students may elect to be reconsidered the following year. Please note that reconsideration will be based on their rank order the following year. As students enter their junior year they must also document 60 hours of community involvement with children and adolescents (see special requirements).

Expectations of Transfer Students

Transfer students may write a letter to the department head appealing to be admitted to the group beginning the fall after their transfer. Students who have 15 semester hours and the required 2.7 overall GPA will be admitted to the groups as space becomes available through attrition.

Special Requirements

Special Education majors will document 60 hours of community involvement with children and adolescents prior to the junior year. The scope of the experiences can involve combinations of volunteerism in school (residential facilities, center-based programs, etc.), or community-based programs (tutoring, scouts, parks and recreation programs). The community service requirement is intended to give students reference points for course content, as well as to provide them with enriching experiences in settings that are comprised of diverse populations.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Hours
42

Area F:	18
EFND 2030; EPSY 2020; SPED 2000; 9 hours of electives	
Major Requirements:	39
SPED 3030, 3030L, 3040, 3050, 3050L, 4040, 4040L, 4100, 4100L, 4120, 4120L, 5400, 5450, 5460 (10 hours)	
Major Electives:	18
<i>Pre-K and Early Childhood</i>	
ELAN 3110, 4120; READ 3420, 3430; two EMAT electives	
<i>Middle School and High School</i>	
EDMS 5020, 5030; READ 3530; 9 hours of electives	
General Electives:	3
Choose three hours from the following: CMSD(LING) 4500; CMSD 4810; EMAT 4600, 4680, 4690; MATH 1700; PSYC 3230; READ 4010; SOCI 1600, 3070	

Total hours required 120

Scholarships

The Carol Jo Bishop Scholarship is available to students in this major.

Speech Communication

Degree

Bachelor of Arts (A.B.)

Contact Person

Ms Jeanette Reid
Office Manager
jreid@uga.cc.uga.edu
(706) 542-4893

Department

Speech Communication
College of Arts and Sciences

Description of the Program

Speech Communication majors receive instruction in both interpersonal communication and public communication. They acquire an understanding of both theory and application in these areas. They also become familiar with the methods of inquiry and research used by scholars in communication and rhetorical studies. After taking an introductory class in public speaking and another in interpersonal communication, majors typically take two or three advanced skills-based courses (e.g., small group communication, interviewing, advanced public speaking). They are required to take a course in Empirical Research Methods (SPCM 3700) and also a methods course in Rhetorical Criticism (SPCM 3200). Majors complete their programs of study with four to seven upper-

division courses in such topics as Nonverbal Communication, Persuasion, Health Communication, or Women and U.S. Public Discourse.

Career Opportunities

Applied and theoretic knowledge of communication processes are the most valuable foundations for any career. Graduates in Speech Communication pursue a wide variety of career options. Some of the most popular post-graduate careers include personnel management, organizational administration, sales, corporate education and training, and public relations in private or public sector organizations. A major in Speech Communication is also excellent preparation for law school, business school, or other professional and graduate training.

Expectations of Transfer Students

Introductory courses in both interpersonal communication and public speaking are required as part of Core Area F. These may be transferred from other institutions, as may a sophomore-level course (e.g., advanced public speaking). The two required methodology classes must be taken at UGA. Upper division courses in the major must also be taken at UGA for credit toward the major. If taken at another institution, these courses can count for general elective credit.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: PHIL 1500 (if not taken in Area F)

Preferred courses in Area D: STAT 2000 or 2210 (if not taken in Area F)

Area F: 18

SPCM 1100, 1500

Choose one course from AFAM 2000; CMLT 2400; DRAM 2130; ENGL 2400; GEOG(HIST) (ANTH) (CMLT) (SOCI) 2100; HIST 2052, 2222, 2502, 2560, 2602; PSYC 2100; PSYC (AFAM) 2150; RELI 1002, 2004; RELI(AFAM) 2005; RUSS 2050; SPCM 1800; SPCM(AFAM) 2810; WMST 1110, 2010

Choose one course from CSCI 1100-1100L; MGMT 2090; WMST(CSCI) 2040-2040L

Choose one course from the following (not already taken in Area D): STAT 2000, 2210

Choose one course from CSCI 1210;
ECON 1100, 2105, 2106; LING 2100;
PHIL 1500, 2500, 2200, 2400

Major Requirements: 18-33
SPCM 3300, 3700; choose seven courses
from the following: 0-3 SPCM courses at
2000 level; 4-7 SPCM courses at 4000
level

General Requirements: 27-42
(Refer to College-wide requirements when
selecting general electives.)
Upper division (15-21 hours)
Any level (12-27 hours)

Total hours required 120

Scholarships

The Olive M. Cone Scholarship is awarded each year to a Speech Communication major who exemplifies high academic achievement and commitment to the discipline. A limited number of scholarships are also available to students who participate in the Georgia Debate Union.

Internships

Internship credit may be available to students who exceed a 2.5 overall GPA, who exceed a 3.0 major GPA, who have completed SPCM 3700 and SPCM 3200, and who have also taken at least one 4000 level course in Speech Communication.

Minor in Speech Communication

Contact the department for requirements.

Sport Studies

Degree

Bachelor of Science in Education (B.S. Ed.)

Contact Person

Dr. Carolyn Lehr
Sport Studies Coordinator
clehr@uga.cc.uga.edu
(706) 542-4362

Department

Physical Education and Sport Studies
College of Education

Description of the Program

The major focuses on a study of sport from economic, political, cultural, philosophical, historical, sociological, behavioral, and artistic perspectives. In addition to this interdisciplinary foundation, students will select an area of interest in either sport leadership, sport business, or sport communication.

Career Opportunities

The burgeoning sport industry accounts for 4.5 million jobs and \$100 billion in annual revenues. Job listings for sport-related careers increase daily in the retail sporting goods industry, sports facilities management, recreational sport management, sports broadcasting, and a variety of youth sports and athletic settings.

Entrance Requirements

This is a restricted major. All students must have a minimum overall GPA of at least 2.3 for acceptance into the program. A second consideration will be an application in which students will list their previous associations with sport and their future goals. To graduate, a student must have at least a 2.3 overall grade point average.

Expectations of Transfer Students

Students transferring at the junior level should have completed Areas A, C, D, E, and F in the UGA Core Curriculum.

Program Requirements

Semester Core Curriculum

Areas A-E:

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1101

Preferred course in Area C: PHIL 1000

Preferred courses in Area D: BIOL 1103-1103L; CHEM 1110, 1110L; CSCI 1301-1301L

Preferred courses in Area E: PSYC 1101; SOCI 2500

Area F:

CBIO 2200-2200L; CSCI 1301-1301L; minimum of 9 hours from ACCT 2101; ANTH 1102; ECON 2105 or 2106; MATH 2200, 2200L; MGMT 2090, 2090L; PHIL 1000; PSYC 1101; SOCI 2500

Major Requirements:

EXRS 3600 or 3700; PEDS 3400, 3410, 3420, 3440, 3450, 3460, 3470, 3500, 4750, 4820

Choose one of three areas of emphasis:

Sport Leadership

EXRS 2100; PEDS 4610, 5250; RLST 4870; two courses from PEDS 3100, 3110, 3120, 3210, 3220, 3900, 3901, 3902, 3903, 3904, 3905, 3911, 3912, 3913, 3914, 3915, 3916; 17 hours of electives

Sport Business

FINA 3000; MARK 3000; MGMT 3000; MSIT 3000; PEDS 3430; 18 hours of electives

Hours
42

18

60

Sport Communication
 ADPR 3100, 3850; TELE 3010; JOUR 5670 or JRLC 5490; one course from JRLC 5080, 5210, 5490; TELE 5440; 18 hours of electives
Total hours required **120**

Statistics

Degree
 Bachelor of Arts (A.B.), Bachelor of Science (B.S.)
Contact person
 Kermit Hutcheson
 Undergraduate Director
 hutch@stat.uga.edu;
 homepage: http://www.stat.uga.edu
 (706) 542-8232
Department
 Statistics
 College of Arts and Sciences

Description of the Program
 A Statistics major will select a degree option of either Data Analysis or Mathematical Statistics. The Data Analysis option is designed to prepare an individual for a statistical career with only an undergraduate degree. The Mathematical Statistics option is designed to prepare an individual for graduate school and for further training in Statistics.

Career Opportunities
 Employment opportunities exist in industry in a variety of fields and locations. Many students with a bachelor's degree in Statistics work as software developers, quality control analysts, data analysts and consultants.

Entrance Requirements
 Entrance requirements are: MATH 2200, 2200L, 2210, 2210L, 2500, CSCI 1301-1301L and STAT 2000 (2210) or equivalent courses. A student will be advised by Franklin College advisors until these requirements are satisfied.

Expectations of Transfer Students
 Transfer students are welcomed but will be expected to meet the entrance requirements.

Special Requirements
 Specific course requirements vary for each area of specialization; see Program Requirements below.

Program Requirements
Semester Core Curriculum
 Areas A-E: **Hours**
42
 See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113
Preferred courses in Area D: CSCI 1301-1301L, MATH 2200, 2200L, 2210, 2210L, or STAT 2000
Area F: **18**
 Choose 18 hours from CSCI 1301-1301L; MATH 2200, 2200L, 2210, 2210L, 2500; PHIL 2500; STAT 2000
Major Requirements: **24-36**
 Select Option I or Option II
Option I (Data Analysis):
 STAT 4210, 4220, 4230, 4270, 4510
 One 4000-level STAT course
 Two 4000-level courses from STAT, MATH, or CSCI
Option II (Mathematical Statistics):
 STAT 4510, 4520, 4710, 4720; MATH 3000, 3200, 4100
 One 4000-level STAT course
 Four 4000-level courses from STAT, MATH (preferably MATH 4110 and 4120) or CSCI
General Electives: **24-36**
 (Refer to College-wide requirements when selecting general electives.)
 Upper division (3-15 hours)
 Any level (21 hours)
Total hours required **120**

Minor in Statistics
 Contact the department for requirements.

Technological Studies

Degree
 Bachelor of Science in Education (B.S.Ed.)
Contact Person
 Wanda Stitt-Gohdes
 Undergraduate Coordinator
 wls@uga.cc.uga.edu
 (706) 542-4078
Department
 Occupational Studies
 College of Education

Description of the Program
 The technological studies program leads to teacher certification in technology education, trade and industrial, and health occupations education. The program has a core of courses which prepare individuals to understand technology and the impacts technology is having in the world today and in the future. Each specialization has a suggested core of courses that range from technical courses in the technical clusters of energy and power, production and communication to pedagogical

courses that help individuals to prepare for teaching and industrial settings. Emphasis is placed on assisting individuals to develop the ability to think critically, create, learn, and problem solve in technological environments through structured learning experiences that utilize interdisciplinary, interactive, and inquiry-oriented instructional approaches.

Career Opportunities

Students are prepared as teachers for grades 7-12 and postsecondary technical institutes. This educational experience also provides an excellent background for those who may choose to move into the corporate training and development arena.

Expectations of Transfer Students

Recommended courses for teacher certification in technology education include a physics sequence, college algebra and trigonometry, sociology or economics, and computer technology. For teacher certification in Trade and Industrial, demonstrated competence assessed by the National Occupational Competency Testing Institute (NOCTI) for Health Occupations, a health care credential, is required and computer literacy is recommended.

Special Requirements

A 2.5 GPA is required for admission to teacher education.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
<i>Required courses in Area A: ENGL 1101, 1102, and MATH 1101</i>	
Area F:	18
EFND 2030; EPSY 2020; 12 hours of electives (appropriate to academic goals)	
<u>Major Requirements:</u>	22-24
EOCS 2450, 3010, 4350, 4360, 5550; ETES 5460	
<u>Major Electives:</u>	24
<i>Option I:</i>	
ETES 3100 (12 hours), 3110 (12 hours)	
<i>Option II:</i>	
EBUS 4020; ETES 5010, 5020, 5030, 5040, 5060, 5070	
<u>General Electives:</u>	12-14
Any level	
<i>Total hours required</i>	120

Internships

Supervised observations and participation in cooperating schools is required for all students. Full-time student teaching is required for certification.

Telecommunications

Degree

Bachelor of Arts in Journalism (A.B.J.)

Contact Person

Alison F. Alexander
Department Head
alison@uga.cc.uga.edu
(706)542-3785

Department

Telecommunications
College of Journalism and Mass Communication

Description of the Program

This program is designed to train students in production, electronic media studies, management and broadcast news emphases. The major provides students with professional courses of study in both the theory and practice of electronic media.

Career Opportunities

Traditional programming, management, sales, and on-air opportunities in television, radio and film are being supplemented by opportunities in cable, corporate communications, production and post-production, and web and other new communications technologies.

Expectations of Transfer Students

The academic program for the A.B.J. degree consists of the core curriculum taken during the freshman and sophomore years at UGA or another institution and the professional degree program taken after formal admission to the College. Pre-Journalism students at the University of Georgia are enrolled in the College of Arts and Sciences.

Admission to the College is competitive. It should be understood that admission to the University of Georgia does not guarantee admission to the College of Journalism and Mass Communication. A maximum number of spaces in each major is determined by the availability of teaching staff, classroom space, lab facilities and other resources. In reaching its decisions on how many students may be admitted each semester, the Admissions Committee is governed by the number already enrolled in each major, the number expected to graduate and the number applying. Grade point averages and test scores are considered the primary measures upon which admission decisions are based. It is recognized that the inclusion of talented students of diverse international and racial backgrounds is an indispensable part of the educational process and the Committee considers the need for such diversity in reaching its decisions.

Applications must be submitted directly to the Office of Undergraduate Services, Room 201, College of Journalism and Mass Communication.

The deadline is 4:00 p.m. on Friday of the second full week of classes.

Entrance Requirements

Applications are accepted only from students who have met minimum requirements in number of credit hours (at least 45 semester hours and enrollment in sufficient hours at the University to attain junior status at the end of the semester), cumulative and overall grade point averages of at least 2.5, and English proficiency (recentred SATV score of at least 650, ACTV score of at least 30 or at least 77 on an English proficiency test administered by UGA's Testing Center). Meeting *minimum* requirements assures consideration but is not a guarantee of admission.

A point system based on academic achievement and test scores determines a student's standing among other applicants. Those presenting the highest qualifications are accepted each semester of the academic year.

Special Requirements

No more than 7 semester credit hours in journalism and mass communication courses earned before admission to the College, whether at UGA or another institution, may be applied toward satisfaction of requirements for the A.B.J. degree. At least 20 semester credit hours of journalism and mass communication courses which satisfy A.B.J. degree credit must be earned at the University of Georgia.

A total of 121 semester hours (includes one hour PE) must be successfully completed to earn the A.B.J. degree. A minimum of 64 semester credit hours must be earned in the liberal arts. No more than 30-32 semester credit hours in journalism and mass communication courses may be applied toward requirements for the Telecommunications major.

A grade of C or higher must be earned in any journalism and mass communication course or any prerequisite to such a course which counts toward satisfaction of requirements for the A.B.J. degree.

Fees

Some courses require the purchase of a supply card from the University bookstore.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42
See Core Curriculum	
Required courses in Area A: ENGL 1101, 1102, and MATH 1101	
Area F:	18
Six hours of a foreign Language sequence beyond CPC level	
ECON 2105 or 2106	

Choose 9 hours from anthropology, art, classical culture, comparative literature, drama, English, geography, history, philosophy, political science, psychology, religion, sociology, speech communication, statistics

Major Requirements:

JRLC 5040; TELE 3010, 3210, 3310, 3410
Choose 15 hours from an Area of Emphasis:

Production

TELE 3110, 4250 or 5250, 4290 or 5260
*Choose 6 hours from TELE 4250, 4270, 4290, 5010, 5250, 5260

Media Studies

TELE 3110, 4420, 4450
*Choose 6 hours from JOUR 5410; JRLC 5080, 5210; TELE 4350, 5010, 5170, 5440, 5990

Management

TELE 3110, 4350, 4450
*Choose 6 hours from JOUR 5410; JRLC 5080, 5210; TELE 5010, 5170, 5990

News

TELE 5560, 5570, 5580, 5590
*Choose 3 hours from JOUR 5410, 5080; JRLC 5210; TELE 4450, 5010

*It is strongly suggested that courses be chosen from the areas shown; however, any course offered in the College may be included if prerequisites have been met.

Major Electives:

Choose 15 hours of upper division electives in no more than two disciplines other than journalism and mass communication, academic assistance, physical education, military, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

General Electives:

Choose 15 hours of courses at any level in any discipline other than journalism and mass communication, academic assistance, physical education, university orientation, and any other courses that are developmental, remedial, or preparatory in nature or do not earn graduation credit.

Total hours required

120

Scholarships

The College administers about 25 undergraduate scholarships. Students may submit a general application during the spring semester that assures them of consideration for any of the scholarships for which they qualify for the coming academic year.

30

15

15

Internships

Students gain practical experience by serving in internships. Although not required, internships are considered essential to a student's total educational experience and greatly enhance job opportunities upon graduation. Three semester credit hours may be earned for successful completion of an internship if:

1. Advance approval is received from the student's department. (A written request must be submitted that includes a job description, length of internship, name of supervisor and rate of pay. A letter verifying the internship offer must be submitted by the employer prior to the first day of the semester in which the internship is served.)
2. Certain basic courses as determined by the department have been completed.
3. The internship covers a minimum number of weeks of full-time employment as determined by the department.
4. During the semester of the internship the student registers concurrently for TELE 5010, which is included in the maximum semester hours of journalism and mass communication credit that may be earned toward the Telecommunications major.
5. A written report is submitted by the employer prior to the last day of the semester in which the internship is served describing the intern's duties and the quality of performance.
6. A final, written report of week-by-week activities is submitted by the student to the department prior to the last day of the semester in which the internship is served.

Turfgrass Management

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Persons

Dr. Keith Kamok

Professor

kkamok@uga.cc.uga.edu

(706) 542-0931

Dr. Bill Randle

Associate Professor

wrandle@uga.cc.uga.edu

(706) 542-2471

Department

Crop and Soil Sciences; Horticulture

College of Agricultural and Environmental Sciences

Description of the Program

Turfgrass management is the study of the science and culture of fine grasses that are used on golf courses, athletic fields, home lawns, and other areas requiring an attractive but functional ground

cover. Increasing interest in outdoor recreational activities as well as aesthetically appealing landscaped areas has created a demand for professional turfgrass managers. The turfgrass management major at the University of Georgia is unique in that it is the only 4-year turf program in the United States that is jointly administered by two departments. The combined effort of the departments of Crop and Soil Sciences and Horticulture provide greater resources to students in terms of laboratories, teaching equipment, demonstration field plots, faculty expertise, and course offerings.

The curriculum is designed for maximum flexibility that allows students the opportunity to select one of two paths depending on their interest and future goals. Both paths will enable students the ability to secure any of the jobs discussed above as well as to enter graduate school. Specifically, the curriculum educates students in the principles and applications of both applied and basic sciences necessary for the successful establishment and maintenance of fine turfgrass areas. Students completing the turfgrass management curriculum will be knowledgeable in all aspects of plant and soil science. Particular emphasis is placed on learning environmentally sound strategies for controlling common turfgrass pests such as weeds, insects, and diseases. A careful balance of applied and basic sciences with courses in economics, business management, and accounting combined with on-the-job training opportunities will prepare students for an exciting career in the turfgrass/landscape industry.

Career Opportunities

The turfgrass industry is one of the fastest growing industries in the United States. In Georgia, it is estimated at more than one billion dollars. Completion of the turfgrass management major will allow a student the opportunity to pursue a career in golf course, athletic field, park, school, and commercial grounds management. There are many openings in the relatively new chemical lawn care industry as well as with sod production, lawn maintenance, and landscaping firms. Other opportunities include the need for well-trained individuals in the areas of turfgrass seed, chemical, and equipment sales and service. Some graduates have obtained employment in the irrigation design and installation segment of the industry, while others have found challenging careers in university research, private consulting, or with the Cooperative Extension Service. The current and future outlook for job availability is excellent. For example, two-thirds of the respondents of a recent nationwide survey of 4-year turf programs indicated between 2 to 4 jobs per graduating student. Almost 40 percent of the

respondents also indicated that they expected job availability to increase over the next several years. In short, the future looks extremely bright for careers in turfgrass management.

Program Requirements

Semester Core Curriculum

Areas A-E: **Hours** 42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred course in Area C: SPCM 1100 (take under general electives if not taken in Area C)

Preferred courses in Area D: BIOL 1107-1107L or BTNY 1210-1210L; CHEM 1212, 1212L; MATH 2200, 2200L

Area F: **Hours** 18

BIOL 1108-1108L or BTNY 1220-1220L; CHEM 1212, 1212L, 2100, 2100L; CRSS 2010-2010L or HORT 2000; PHYS 1111-1111L

Major Requirements: **Hours** 35

BTNY 3830-3830L; CRSS 3050-3050L, 3270-3270L, 4340-4340L; CRSS(ENTO) (PATH) 3500; ENTO 3740-3740L; HORT 3700, 3710, 4090; PATH 3530-3530L; PGEN 3580-3580L

Major Electives: **Hours** 11-14

Option I - Crop and Soil Sciences

CRSS 2830, 4040, 4270, 4590-4590L; at least one 3-hour course from AAEC, ACCT, or ECON

Option II - Horticulture

AAEC 2110, 3980; CRSS 4090; ENGR 3070; HORT 4000, 4110

General Electives: **Hours** 10-13

Any level

Total hours required **Hours** 120

Scholarships

Numerous opportunities for financial assistance are available. These include the Georgia State Golf Association Scholarship; Agronomy Club Scholarship; Georgia Ag Chem Society Scholarship; Georgia Chapter American Society of Agronomy Scholarship; and the AgrEvo Turf Scholarship. Also, several scholarships are available to students in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships

Numerous internship opportunities are available to provide Turfgrass Management students with training and experience.

Minor in Turfgrass Management

Contact the department for requirements.

Veterinary Medicine

See Pre-Veterinary Medicine programs on pages 296 and 297 of this Bulletin, see the College of Veterinary Medicine on page 87, or contact the College for a copy of the *College of Veterinary Medicine Bulletin* for information on professional and graduate programs.

Wildlife

Degree

Bachelor of Science in Forest Resources (B.S.F.R.)

Contact Person

Bruce C. Bongarten

Associate Dean

bongarten@smokey.forestry.uga.edu

(706)542-4284

Department

School of Forest Resources

Description of the Program

The Wildlife major provides a strong background in the biological, ecological, and managerial aspects of the wildlife profession. Courses in biology, ecology, and zoology provide a basic understanding of wildlife populations. Courses in botany and forestry are required because of their importance in managing wildlife habitat. Communication and policy courses help educate wildlife biologists to communicate effectively with the public and work within political and regulatory arenas. Graduates from the Wildlife major meet the educational requirements for certification as Associate Wildlife Biologists by the Wildlife Society.

Career Opportunities

Graduates may work for a variety of employers, including government agencies, consulting companies, and conservation organizations.

Entrance Requirements

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Application forms for admission to the Warnell School of Forest Resources are available from the Associate Dean's office. Students may apply for fall or spring semester admission. A maximum of 60 students will be admitted each semester. Applications for fall semester admission are due April 1. Applications for spring semester admission are due September 15. (Note that these deadlines may be earlier than University of Georgia application deadlines). To be eligible for admission to the Professional Program, students must have completed the 60 hour pre-Professional curriculum, except that up to 8 credits of electives

(and/or SPCM 1100) may be deferred if an equal number of credits have been completed from the following courses: ECOL (FORS) 3260-3260L (Wildlife and Fisheries and Aquaculture majors only), FORS 3010-3010L, FORS 3020-3020L, and CRSS(FORS) 3060-3060L. For information on the admissions process, see the Warnell School of Forest Resources section of this Bulletin.

Expectations of Transfer Students

Entry to the major requires admission to the Warnell School of Forest Resources in addition to admission to the University of Georgia. Admission to the major is not granted until the 60 credit pre-Professional program is completed. Transfer students should contact the Associate Dean, Warnell School of Forest Resources, for information on pre-Professional Program requirements and confirmation of transfer credit.

Special Requirements

The Wildlife major requires 123 semester credits: 63 in the Professional Program and 60 in the pre-Professional Program.

Program Requirements

<u>Semester Core Curriculum</u>	Hours
Areas A-E:	42

See Core Curriculum

Required courses in Area A: ENGL 1101, 1102, and MATH 1113

Preferred courses in Area D: BIOL 1107-1107L, CHEM 1211, 1211L, and MATH 2200, 2200L (take under major electives if not taken in Area D)

Preferred course in Area E: ECON 2106 (take under major electives if not taken in Area E)

Area F:	18
BIOL 1108-1108L; CHEM 1212, 1212L; SPCM 1100; STAT 2000; any 2000-level GENE course	

<u>Major Requirements:</u>	60
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CRSS(FORS) 3060-3060L; ECOL (FORS) 3260-3260L; FORS 3000-3000L, 3010-3010L, 3020-3020L, 3300; FORS (ECOL) 3580-3580L; FORS 3610-3610L, 3710-3710D, 3910-3910L, 4010-4010L, 4300-4300L, 4320, 4730 or 4750, 4800-4800D, 5310-5310L; any 4000-level (4-hour) BTNY course

<u>Major Electives:</u>	3
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<i>Total hours required</i>	123
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Fees

Tuition in the Professional Program is approximately 10% greater than for non-Professional programs.

Scholarships

In addition to the financial assistance offered through the University's Office of Student Financial Aid, a number of scholarships and awards are available specifically for undergraduate students in forest resources. These awards total about \$80,000 annually, and are made possible by donations from forest-related industries and organizations, and from alumni and other interested individuals.

Selection for these scholarships is based on academic achievement, leadership ability, and financial need. Application forms may be obtained from the Office of the Associate Dean

Internships, Cooperative Education

An active internship program gives students opportunity to supplement their classroom studies with practical experience in forest resource management. Students may work with private companies, landowners, conservation organizations, and federal and state agencies.

The school also offers a Cooperative Education Program with federal and state agencies such as the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the Georgia Department of Natural Resources. Students may alternate semesters of off-campus work with semesters of on-campus study. Although we make every effort to facilitate cooperative education, the arrangement for such programs is usually left to student initiative.

Women's Studies

Degree

Bachelor of Arts (A.B.), Bachelor of Science (B.S.)

Contact Person

Heather S. Kleiner
Associate Director
Women's Studies Program
hkleiner@uga.cc.uga.edu
(706) 542-2846

Department

Women's Studies Program
College of Arts and Sciences

Description of the Program

Students from any school or college may pursue a certificate or minor in Women's Studies (for information on the certificate program, see the Undergraduate Certificate Programs section of this Bulletin).

Qualified students in the College of Arts and Sciences may major in Women's Studies through the Interdisciplinary Studies (IDS) or Honors Interdisciplinary Studies (HIDS) programs. To do

this, a student must plan a program of study and senior thesis with a faculty advisor and an advisory committee. Honors students should contact the Honors Program for information on HIDS.

The IDS major consists of a minimum of 24 hours of courses plus a Senior Thesis (3 hours) on a topic of special interest. The 24 hours must be drawn from two or more departments of the College of Arts and Sciences. Some programs may include courses from other colleges within the university, although Programs of Study involving more than 9 hours outside of Arts and Sciences may require special permission.

Career Opportunities

A major in Women's Studies opens career opportunities in the fields of law, women's health, education, counseling, public relations, politics, and many others.

Entrance Requirements

IDS applicants must have completed 60 semester hours with a GPA of 3.0 or higher. HIDS applicants should contact the Honors Program for their requirements. All students should have completed the following courses prior to applying for the major: WMST 1110 or 1110H or 2010 or 2010H; WMST(CSCI) 2040-2040L or an equivalent course in computing; a basic statistics course; and three semesters of a foreign language.

Expectations of Transfer Students

A minimum of a B or better in transferred work is required; a maximum of six semester hours of transferred work may be petitioned into the major.

Special Requirements

Students must maintain at least a 3.0 average on all courses taken in order to remain as IDS majors. For HIDS requirements, contact the Honors Program.

Scholarships and Internships

The Women's Studies Program keeps a current copy of the *Directory of Financial Aid for Women* in its library. This resource book contains information on scholarships, fellowships, loans, grants, awards, and internships set aside for women. For more information, call (706) 542-2846.

Minor in Women's Studies

Contact the department for requirements.

Pre-Professional Programs

Pre-Journalism

The Henry W. Grady College of Journalism and Mass Communication enrolls undergraduate students in the junior and senior years only. Freshmen and sophomore students who plan to apply to the College of Journalism are admitted to, and advised in, the Franklin College as "pre-journalism" majors until they enter the College of Journalism or until the beginning of their junior year, whichever comes first. Academic advising for pre-journalism students takes place in 106 New College. Details regarding admission to and degree requirements of the College of Journalism appear in that section of this Bulletin.

Pre-Law

Advisor

Ms. Wanda F. Wilcox
106 New College

The University of Georgia does not offer a degree with a major in pre-law. Students may be accepted declaring pre-law as their intention, but they should work with their academic advisors to choose specific degrees and major. All students enrolled in the Franklin College of Arts and Sciences who are interested in attending law school should seek advice from the pre-law advisor. Additionally, a Pre-Law Guide is available, in print in 106 New College and on-line at <http://ben.franklin.uga.edu/saga/lawcont.htm>.

Pre-Medicine, Pre-Dentistry, and Pre-Optometry

Chief Health Professions Advisor

Dr. R. Alan Langford, M.D.
210 New College

In almost all cases, baccalaureate degrees are required for admission to schools of medicine and

dentistry. At The University of Georgia, "pre-med" and "pre-dent" are not majors, so students who plan to attend medical or dental school should select majors and follow regular degree programs. There is no one "best" major for students interested in these areas, but it is critical that course selection includes both those science courses needed to assure a good score on the standardized admissions tests and course prerequisites for admission to the medical or dental schools to which the student is interested in applying.

A booklet, "Guidelines for Premedical/Predental Students at UGA" is available. Additionally, two helpful on-line web sites are: <http://www.biosci.uga.edu> (Division of Biological Sciences) and <http://www.aamc.org> (Association of American Medical Colleges).

Occasionally, students who demonstrate truly exceptional ability and performance are admitted to the Medical College of Georgia School of Medicine or School of Dentistry before completion of the baccalaureate degrees. If such students satisfy certain requirements, they *may* be awarded Bachelor of Science degrees, in Pre-Medicine or Pre-Dentistry, following the satisfactory completion of the first year of professional school. For information about this program, students should contact the Chief Health Professions Advisor early in their academic programs of study.

Pre-Nursing and Other Allied Health Sciences

Advisor

Ms. Jane G. Hudson
106 New College

The University of Georgia does not offer degrees in nursing, physical or occupational therapy, or any other allied health areas, but academic advising is available for students who wish to complete the freshmen and sophomore requirements for such programs prior to transferring to institutions which do offer these majors. Additionally, a complete Pre-Nursing Handbook can be found on the web at <http://ben.franklin.uga.edu/saga/data/nurse1.htm>.

Pre-Pharmacy

Advisor

Dr. Jeanne Prine
College of Pharmacy

To be admitted to the professional program in the College of Pharmacy, a student must have completed 60 semester hours of specified pre-pharmacy coursework. Applicants should take the Pharmacy College Admission Test during the Fall semester prior to the one in which they plan to enter the College of Pharmacy. Students with high academic averages and 60 semester hours of credit may be admitted with not more than 3 semester hours of deficiencies in non-science required courses, provided such deficiencies will be completed before the second professional year. For information concerning the pre-pharmacy curriculum, refer to the College of Pharmacy section of this Bulletin.

Pre-Theology

Students planning to enter theological seminaries following graduation from the University of Georgia should consult with the faculty advisor in the Department of Religion no later than the beginning of their junior years.

Pre-Veterinary Medicine (B.S.)

Academic advising information for Franklin College students who wish to complete baccalaureate degrees prior to entering colleges of veterinary medicine is available from **Ms. Jane G. Hudson, Senior Academic Advisor, Franklin College of Arts and Sciences, 106 New College.**

Occasionally, students are granted admission to the University of Georgia College of Veterinary Medicine prior to completion of their baccalaureate degrees. Such students may, after the successful completion of all baccalaureate degree core curricular requirements and of their first year of professional school, be awarded a B.S.- Pre-Veterinary Medicine degree from the Franklin College of Arts and Sciences. Students considering this option should realize that admission to the University of Georgia College of Veterinary Medicine is highly competitive and would be well-advised to have an alternative plan in mind, i.e., the pursuit of a baccalaureate degree program with a

specific major. For additional information about this program, students should consult the Admissions Information and Bulletin of the College of Veterinary Medicine or contact Dr. Sheila W. Allen, Associate Dean for Academic Affairs, College of Veterinary Medicine.

Pre-Veterinary Medicine (B.S.A.)

Degree

Bachelor of Science in Agriculture (B.S.A.)

Contact Person

Walter Britton

Professor and Undergraduate Coordinator

wmbritt@uga.cc.uga.edu

phone: (706) 542-1366

Department

Poultry Science

College of Agricultural and Environmental Sciences

Description of the Program

Admission to the University of Georgia College of Veterinary Medicine requires a rigorous program of undergraduate study in the basic sciences. Students are encouraged to plan their program of undergraduate study carefully so that they will receive a Bachelor of Science in Agriculture whether or not they are later admitted to the College of Veterinary Medicine.

The College of Veterinary Medicine has a limited enrollment policy and selects for admission only about one-half of its applicants. Selection of the best qualified applicants for admission is the responsibility of a faculty committee within the College. The committee considers applicants who have met the minimum academic requirements including at least three years of study, or its equivalent, at an accredited college.

Students normally apply for admission to the College of Veterinary Medicine during their third year of study in the College of Agricultural and Environmental Sciences pre-veterinary medicine program. Students not admitted to Veterinary Medicine may continue their study in the College of Agricultural and Environmental Sciences for a fourth year to complete the requirements for the B.S.A. degree in any major they choose. Several degree programs within the College are compatible with the pre-veterinary medicine program.

The program of study will meet the dual objectives of completing the requirements for admission to the College of Veterinary Medicine and the requirements for a Bachelor of Science degree in

the College of Agricultural and Environmental Sciences. Students should contact the Associate Dean for Academic Affairs, College of Veterinary Medicine, for a more detailed description of requirements for admission to that college.

Entrance Requirements

Most students pursuing a pre-veterinary medicine program of study choose the Animal Health major. However, pre-veterinary medicine study may also be completed by enrollment in several other related majors such as Animal Science, Biological Science, Dairy Science, Environmental Health Science, or Poultry Science.

Scholarships

Several scholarships are available to students in the College of Agricultural and Environmental Sciences. For more information, contact the Office of Academic Affairs in the College.

Internships

Internships are available but not required.

Undergraduate Certificate Programs

African Studies

Contact Person

B. Ikubolajeh Logan

Director, African Studies Program

(706) 542-2856

Department

Geography

College of Arts and Sciences

Description of the Program

The certificate program in African Studies is designed for the student who wishes to learn about Africa generally, and to focus on a specific socio-cultural aspect of the of the region, for example, language, religion, or literature. In addition to providing regional education, the certificate program offers students an opportunity to complement majors in a wide array of disciplines including anthropology, sociology, geography, business, journalism, and education. Students can simultaneously satisfy the requirements of the certificate program while completing their college and university electives requirements.

For specific program requirements, contact the director of the African Studies Program.

African American Studies

Contact Person

Dr. R. Baxter Miller

Director, Institute for African American Studies

Description of the Program

The Institute for African American Studies provides a central focus for study of the impact of African American contributions upon human culture. The Institute is dedicated to creative research on the achievements of African Americans and to stimulating instruction for a diverse community of thinkers. In addition, the Institute serves as a cultural repository and resource for the citizenry of Georgia.

The Institute offers a certificate upon completion of four courses offered by the Institute, plus an additional two courses approved by the Institute's Director. A major is being submitted to the Board of Regents. For further information, contact the Director of the Institute for African American Studies.

Comparative Literature

Contact Person

Masaki Mori

Undergraduate Coordinator

cmsmamo@uga.cc.uga.edu

(706) 542-2146

Department

Comparative Literature

College of Arts and Sciences

Description of the Program

Students may qualify for a Certificate in Comparative Literature by completing the Arts and Sciences language requirement and the following CMLT courses: CMLT 4010 and three additional CMLT courses at the 4000 level. One 3000-level CMLT course may be substituted for any of these additional courses. A program of study providing training in literary history, theory, and interpretation that supplements the student's training in another discipline will be designed in consultation with the undergraduate advisor.

Career Opportunities

Students may pursue graduate study, or find employment in education, foreign service, and international business.

Environmental Ethics

Contact Person

Dr. Peter Hartel

Department of Crop and Soil Sciences

College of Agricultural and Environmental Sciences

(706) 542-0898

Description of the Program

The Environmental Ethics Certificate Program trains students to make decisions about environmental problems that involve competing values. Students benefit from viewing environmental issues from an interdisciplinary perspective. The undergraduate program, established in 1994, parallels the graduate program which began in 1983 and complements the University's environmental literacy requirement. The certificate program was the first of its type in the United States.

The certificate is awarded to undergraduate students who successfully complete at least 18 hours of undergraduate course work, including at least 7 credit hours in core courses (one 3- or 4-hour course in ecology, one 3-hour course in ethics, and one 1-hour course in environmental ethics seminar), 7 or 8 hours in approved elective courses, and 3 hours for an approved research paper in environmental ethics.

To be eligible for admission to the program, an undergraduate student must have completed at least three quarters or two semesters of full-time enrollment (must be a rising sophomore). For further information, contact the coordinator, Peter G. Hartel, Department of Crop and Soil Sciences, 542-0898.

French Studies

Contact Person

Jean-Pierre J. Piriou,

Coordinator, French Studies Program

(706) 542-3138

jppiriou@uga.cc.uga.edu

Department

Romance Languages

College of Arts and Sciences

Description of the Program

The French Studies Program at the University of Georgia offers the student an opportunity to share in a current national interest in French Studies and, at the same time, to develop a humanistic understanding of French civilization through the study of

the French language, history, art, government, geography, literature, and philosophy.

The French Studies Program is based on a departmental major leading to the Bachelor of Arts or Bachelor of Science degree. Interested students must apply and be admitted to the program before the end of the first semester of their sophomore year. Students completing the requirements of this special program of study will receive the Certificate in French Studies upon graduation.

Applications for admission to the program and further information may be obtained from the coordinator of the French Studies Program.

German Studies

Contact Person

Dr. Paul Popov

Coordinator, German Studies Program

Department

Germanic and Slavic Languages

College of Arts and Sciences

Description of the Program

The German Studies Program, established in 1979, offers the student a thorough and systematic study of German which will augment his or her particular discipline or major. The study of foreign languages, German in particular, is becoming increasingly important and greatly enhances the student's possibilities for entering and advancing in a broad variety of careers and occupations.

The student may earn the German Language Certificate and/or the Certificate in German Studies in conjunction with his or her work for the Bachelor's Degree. The former emphasizes the study of the language with primary emphasis on conversation, composition, stylistics and techniques of translation. The latter program is interdisciplinary and is designed to integrate the study of German with other disciplines such as art, economics, geography, history, music, philosophy, political science, etc.

Interested students are urged to apply and be admitted to the program of their choice before the end of their sophomore year. Further information may be obtained from the coordinator of the German Studies Program.

Geographic Information Science

Contact Person

Dr. E. Lynn Usery

(706)542-2346

Department

Geography

College of Arts and Sciences

Description of the Program

The Geographic Information Science Certificate Program is designed to prepare undergraduates with the basic training necessary to enter the rapidly expanding field of geographic information science (GIS). There are three components to the curriculum: a set of prerequisite courses necessary to gain entry to the program, a set of core courses required of all students enrolled in the certificate program, and a set of elective courses that permit exploration of more advanced themes in GIS and/or development of individual research projects or internships in GIS. The certificate program consists of 15-16 credit hours divided into 9 core hours and 6-7 elective hours, following 8-12 prerequisite hours.

Special Requirements

Students must maintain a 3.0 GPA in the five core and elective courses that constitute the certificate program. Certificates will be awarded only in conjunction with completion of baccalaureate requirements in one of the academic units at UGA. This stipulation is waived for post-baccalaureate students.

Global Studies

Contact Person

Silvia Mapp

Program Coordinator

cmsmapp@uga.cc.uga.edu

(706)542-6633

Department

College of Arts and Sciences

Description of the Program

The Certificate in Global Studies is designed to offer a global perspective, to facilitate the ability to communicate in different languages, to help develop an appreciation for other cultures, and to promote informed analysis of global issues. The certificate serves both educational and vocational purposes through the advancement of an understanding of global affairs and other cultures and

preparation for a growing number of international careers in government, business, and non-governmental organizations.

Career Opportunities

Employment opportunities exist in international organizations (government and non-government), multinational civic and economic organizations, and nonprofit humanitarian institutions.

International Agriculture

Contact Person

Edward T. Kanemasu
Regents Professor and Coordinator
Office of International Agriculture
ekanema@uga.cc.uga.edu
(706)542-7803

College

College of Agricultural and Environmental Sciences

Description of the program

Undergraduate students in Agricultural and Environmental Sciences may focus their degree programs on the special problems of international agriculture and trade relationships. The Certificate in International Agriculture is designed to add a global dimension to all programs in the College.

To obtain a Certificate in International Agriculture, students include courses in foreign language, geography, economic development, and international marketing. Careful planning will allow most students to qualify for the Certificate in International Agriculture by taking these courses as general electives while meeting degree requirements. Admission to the program and further information may be obtained from the Office of Academic Affairs, 102 Conner Hall.

Entrance Requirements

Student must major in an area within the College of Agricultural and Environmental Sciences.

Career Opportunities

Employment opportunities exist in international agribusiness, government service, international scientific companies, import/export companies, freight forwarders, international marketing firms, teaching abroad/teaching foreign students, non-governmental organizations (NGOs), and multinational companies

Latin American Studies

Contact Persons

Brent Berlin
CLACS Director and Graham Perdue Professor of Anthropology
obberlin@uga.cc.uga.edu
(706)542-1452

Fausto O. Sarmiento
CLACS Program Coordinator
fsarmien@uga.cc.uga.edu
(706)542-9079

Department

Center for Latin American and Caribbean Studies
College of Arts and Sciences

Description of the Program

The Latin American Studies Program was established to coordinate and develop facilities at the University to provide interdisciplinary preparation for students who are planning careers that require specialized knowledge of the Latin American republics and the Inter-American system.

Career Opportunities

Students who earn a Certificate in Latin American Studies enhance their opportunities to work in international business and finance, consulting, international development, technology cooperation and in overseas positions with American companies in Latin America and the Caribbean. Besides their formal major, the certificate entitles the prospective UGA graduate recognition of his/her mastery of the language and culture of the region and facilitates more connections at the local level. Graduates have found employment in corporations such as Coca-Cola, AT&T, and BellSouth; in organizations such as CARE, the Peace Corps, the Nature Conservancy; and in colleges teaching Spanish or Portuguese.

Entrance Requirements

Open to students who have completed 30 hours with grade C or better, with demonstrable knowledge of a language of the region (Spanish, Portuguese, French, Tzotzil, Tzeltal, Quichua, Guarani, Aymara, etc.), and willingness to further Latin Americanism on campus.

Applications for admission to the program and further information may be obtained from the CLACS Program Coordinator.

Medieval Studies

Contact Person

Dr. Jonathan Evans
Director, Medieval Studies Program
jdmevans@uga.cc.uga.edu
(706) 542-2229; 542-1261

Department

English
College of Arts and Sciences

Description of the Program

Regardless of their major, students of the medieval period have discovered that an interdisciplinary approach is necessary to achieve understanding and expertise in their area of study. Established in 1974, The University of Georgia Medieval Studies Program is the only program of its kind in the state and the earliest-established certificate program supported by the University of Georgia. Through the UGA Medieval Studies Program, undergraduate students can establish an interdisciplinary concentration leading to the Certificate in Medieval Studies while completing their degree in one of the established departments.

The individual student program is developed in consultation with the student's major professor and approved by the Steering Committee of the Medieval Studies Program. Upon completion of the approved plan of study, the A.B. candidate is awarded the Certificate in Medieval Studies with the baccalaureate diploma.

For specific requirements, contact the coordinator of the Medieval Studies Program.

Women's Studies

Contact Person

Heather S. Kleiner
Associate Director
Women's Studies Program
<hkkleiner@uga.cc.uga.edu>
(706) 542-2846

Department

Women's Studies Program
College of Arts and Sciences

Description of the Program

The Women's Studies Program is an academic program providing an interdisciplinary perspective on women. The program cooperates with departments of all schools and colleges of the University in developing courses that focus on women and in integrating the new scholarship on women into existing courses. Traditional academic disciplines have devoted little systematic attention to gender.

In the past 25 years, feminist scholars have contributed to the reinterpretation of existing data and to the presentation of new knowledge about the diversity of women's experiences. Through course work, the Women's Studies Program offers students an opportunity to explore women's roles, contributions, and perspectives, and in doing so, rectifies omissions in the existing curriculum. We communicate with the University community electronically through our listserv (UGAWSP-L@uga.cc.uga.edu) and Web page (<http://www.uga.edu/~wsp>).

Two courses, WMST 2010 (and 2010H) Introduction to Women's Studies and WMST 1110 (and 1110H) Multicultural Perspectives on Women in the United States, are social science options in the College of Arts and Sciences' core. Also, WMST 1110 and WMST 3110 Gender, Race and Class are options which can fulfill the College of Arts and Sciences' multicultural education requirement.

The Certificate in Women's Studies is awarded upon completion of 18 semester hours of approved courses. All candidates must include (1) WMST 1110 or 1110H or 2010 or 2010H, **and** (2) WMST 4010 Introduction to Feminist Theory in their programs of study. The 12 hours remaining will be drawn primarily from a list of Core Course Options, devoted exclusively or primarily to topics pertaining to women and gender. With special permission, a student may take three hours of WMST 4950 Directed Studies in Women's Studies, **or** three hours of Directed Studies in a department, **or** three hours of a Related Course in which there is an opportunity to study women through units offered by the instructor or through term papers. The Women's Studies advisor can provide current information on core and related courses.

Depending upon the student's degree program, Certificate courses may count toward general studies, the major, or elective offerings. A grade of C or better in each course is required. With the exception of WMST courses, no more than 6 semester hours may be taken in the same department (or have the same prefix). No more than 6 semester hours may be taken with the same instructor. No more than 6 semester hours of course work taken at other colleges or universities may be applied toward the Certificate. Interested students will need to discuss their plans for the Certificate with their own advisors early in their academic careers so that proper sequencing of prerequisites, where required, can be allowed for. Also, they must contact the Women's Studies

Advisor to complete an application, to declare a proposed course of study, and to secure information about semester course offerings.

Career Opportunities

A certificate in women’s studies complements any academic major and opens career opportunities in fields of law, women’s health, education, counseling, public relations, politics, and many others.



Prefix Abbreviations

Courses in this section are listed in alphabetical order by prefix. Courses under prefixes for which no page numbers are indicated are graduate or professional level, or were not available at the time of printing, and therefore do not appear in this Bulletin. For a complete list of all courses offered at the University, see the Bulletin web site at <http://bulletin.uga.edu>.

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Courses of Instruction

(AAEC) Agricultural and Applied Economics

College of Agricultural and Environmental Sciences, Department of Agricultural and Applied Economics

AAEC 2020-2020L. Introduction to Computers in Agribusiness and Natural Resources. 2 hours. One lecture and one 2-hour lab period.

Computer technology, and the application of computer technology for the solution of business and economic problems in agriculture and natural resources. Applications will include spreadsheets, word processing, electronic mail, and locating and obtaining information over the Internet.

Offered spring semester.

AAEC 2110. Agribusiness Accounting. 3 hours.

Not open to students with credit in ACCT 2101 or ACCT 1160.

Accounting for agribusiness firms with emphasis on financial statement preparation and analysis of accounting information for managerial purposes. Special emphasis is given to problems of income measurement and asset valuation for agribusiness firms.

Offered fall and spring semesters.

AAEC 2580. Applied Microeconomic Principles. 3 hours.

Not open to students with credit in ECON 2106.

Individual consumer and producer behavior in a market economy using economic principles to analyze, and solve problems in resource allocation, food production, distribution, environmental management, economic development, and international trade.

Offered fall, spring, and summer semesters.

AAEC 3010. Farm Organization and Management. 3 hours.

Prerequisite: AAEC 2580 or ECON 2106.

The study of individual farm programs for the purpose of determining methods to be used for increasing farm income.

Offered spring semester.

AAEC 3040. Agribusiness Marketing. 3 hours.

Prerequisite: AAEC 2580 or ECON 2106.

Agribusiness marketing for farm products describing and analyzing agribusiness marketing functions to have a comprehensive understanding of the principles of agribusiness marketing.

Offered spring semester.

AAEC 3060. Principles of Resource Economics. 3 hours.

Prerequisite: AAEC 2580 or ECON 2106.

Basic theoretical concepts and analytical tools necessary to evaluate resource use, allocation, and policy.

Emphasis is placed upon theoretical applications to natural, rural, and agricultural resources which impact both public sector and private sector economic activities.

Offered fall and spring semesters.

AAEC 3100. Food and Fiber Marketing. 3 hours.

Not open to students with credit in MARK 3000.

Prerequisite: AAEC 2580 or ECON 2106.

Basic concepts of marketing food and fiber and related services and for making essential marketing decisions; approaches food and fiber product marketing as being individual and organization activities aimed at facilitating and expediting exchanges within a set of dynamic environmental factors.

Offered fall semester.

AAEC 3200. Selling in Agribusiness. 3 hours.

Sales and merchandising techniques appropriate for agricultural selling and marketing. The psychology of selling, the selling process, spatial marketing strategies, and communication skills are emphasized, as used in agribusiness.

Offered fall semester.

AAEC 3400. Introduction to Agricultural Policy. 3 hours.

Prerequisite: (AAEC 2580 or ECON 2106) and ECON 2105.

Domestic and international government policies affecting agriculture, agribusinesses, and rural economies. Policy alternatives aimed at solving economic and environmental problems of the food and agricultural sector are identified and evaluated.

Offered fall and spring semesters.

AAEC 3510. Agricultural Credit. 3 hours.

Prerequisite: AAEC 2580 or ECON 2106.

The techniques and principles of finance of the farm firm and a study of needs, sources, and problems associated with credit and capital use among individual farm business units.

Offered spring semester.

AAEC 3580-3580L. Intermediate Economic Principles.

4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in ECON 4010.

Prerequisite: (AAEC 2580 or ECON 2106) and (MATH 2110 or MATH 2210, 2210L).

Competitive and imperfect markets in the allocation of consumer goods and input factors in the free enterprise economy.

Offered fall and spring semesters.

AAEC 3610-3610L. Applied Econometrics. 4 hours.

Three lectures and one 2-hour lab period.

Prerequisite: AAEC 3580-3580L and STAT 2000.

Basic applied econometric analysis, including simple

regression analysis, hypothesis testing, model selection, and data collection techniques. Applications are an integral part of the course, with students using computers to solve problems common in agricultural and environmental sciences.

Offered fall and spring semesters.

AAEC 3690. Agribusiness Finance. 3 hours.

Prerequisite: (AAEC 2580 or ECON 2106) and (AAEC 2110 or ACCT 2101).

Financial concepts and analysis related to agribusiness firms, including analysis based on financial statements, business and financial risk, valuation, and capital budgeting.

Offered fall and spring semesters.

AAEC 3910. Internships. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Junior standing and permission of department.

Educational experience gained while performing an internship for an agribusiness, governmental, environmental management, or natural resource agency or organization.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

AAEC 3980. Introduction to Agribusiness Management. 3 hours.

Not open to students with credit in AAEC 4980/6980.

Prerequisite: AAEC 2580 or ECON 2106.

Managerial concepts, procedures, and techniques in agribusiness management. Techniques of planning, organization, staffing, directing, and controlling functions of management.

Offered spring semester.

AAEC 4040-4040L. Quantitative Approaches to Agribusiness Management. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: STAT 2000.

Agribusiness decision making and forecasting using probabilities and simulation.

Offered spring semester.

AAEC 4050. Agribusiness Law. 3 hours.

Legal principles as they apply to agribusiness, directed toward making students aware of rights and obligations of agribusiness firms. The materials should enable students to recognize and avoid legal problems, and effectively utilize legal counsel.

Offered fall semester.

AAEC 4210/6210. Production Economics: Theory with Applications. 3 hours.

Prerequisite: Undergraduate level only: AAEC 3580-3580L.

Fundamental economic principles in determining efficient adjustments in agricultural resource use consistent with economic growth, and changing technology and economic conditions.

Offered fall semester.

AAEC(EHSC) 4250. Environmental and Public Health Law. 3 hours.

Not open to students with credit in AAEC 4930/6930.

Basic legal principles and procedures as they relate to environmental regulations and public health. Coverage of common law, torts, nuisances, regulatory standards, and state and federal environmental laws. Delineation of significant constitutional and federal regulations that affect managerial decisions.

Offered spring semester.

AAEC 4510/6510. Farm Appraisal. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

The models of appraisal to farm property, including factors influencing farm land and building values, such as land use, soils, crops, livestock, and buildings.

Offered summer semester of odd-numbered years.

AAEC 4650. Environmental Economics. 3 hours.

Prerequisite: AAEC 2580 or ECON 2106.

Economic theory and methods applied to environmental problems and policies. Policies affecting individual and business decisions about environmental quality, policy formation, and incentive-based solutions; alternatives for reform evaluated for political and economic acceptability.

Offered spring semester.

AAEC 4710/6710. Rural Economic Development and Growth. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

Inputs and outputs between agriculture and agricultural businesses; analysis of factors affecting development and economic growth in developing areas.

Offered fall semester.

AAEC 4760. The Economics of Agricultural Processing and Marketing. 3 hours.

Prerequisite: AAEC 3580-3580L.

The economics of the agricultural processing and marketing sectors. Economics of assembly line production; efficient plant size, location, and operation; the economics of commodity storage; the economics of the marketing sector; spatial competition; and price and quantity competition among firms with market power.

Offered spring semester.

AAEC 4800/6800-4800L/6800L. Water Resource Economics. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

The economic aspects of the use, supply, development, and management of water resources with special emphasis on river basin and project planning, benefit-cost analyses, water demands, and multiple use management of water resources.

Offered fall semester.

AAEC(FINA) 4870/6870. Futures and Option Markets. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON2106.

Development, functions, and importance of futures and option markets. Futures and option contracts; issues such as speculation, the roles of commission houses, commodity exchanges, and clearinghouses; and the use of future contracts as instruments for financing business activities. Technical and fundamental trading theories.

Offered fall and spring semesters.

AAEC 4930/6930. Environmental Law and Governmental Regulation. 3 hours.

Not open to students with credit in AAEC(EHSC) 4250. Regulatory theory, externalities and market failures, definition of key regulations affecting agribusiness, overview of local government law, and delineation of environmental laws relating to agriculture. Current environmental issues are related to statutory, administrative, and regulatory authorities.

Offered fall semester.

AAEC 4960. International Agricultural Trade Policy. 3 hours.

Prerequisite: AAEC 3580-3580L or ECON4010.

Basic international trade theory, its application to agricultural commodity trade, and the effects of international relations and agricultural policy on world trade. Offered spring semester.

AAEC 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

AAEC 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

AAEC 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

AAEC 4980/6980. Agribusiness Management. 3 hours.

Prerequisite: Undergraduate level only: (AAEC2110 or

ACCT2101) and (AAEC 3040 or AAEC 3100).

The basic skills needed to be an effective manager of an agribusiness; applying and integrating these skills into a workable approach to management; provides a step-by-step approach to the application of basic practical management skills in marketing, demand analysis, forecasting, finance, plant operations, and personnel.

Offered on a regular basis.

AAEC 4990. Special Topics in Agricultural and Applied Economics. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Special problems in agricultural, environmental, or other applied economics analysis, decision making, and policy studies.

Offered fall, spring, and summer semesters.

AAEC 4990H. Honors Thesis. 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall, spring, and summer semesters.

(ACAC) Academic Assistance Counseling

Division of Academic Assistance

ACAC 0097. Academic Reentry Skills. 2-3 hours.

Provides students a better understanding of unique challenges associated with reentry to an academic setting.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation.

Not offered on a regular basis.

ACAC 0098. Introduction to Academic Assistance. 2-3 hours.

Provides students a better understanding of realistic study goals, academic motivation, time management, and multi-modal information processing. Special attention will be given to delineating the differences between successful and less successful students.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation.

Not offered on a regular basis.

ACAC 0099. Academic Skills for Success. 2-3 hours.

Development of personal, social, and career exploration skills which facilitate success and achievement in a university setting.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation.

Offered fall, spring, and summer semesters.

(ACAE) Academic Assistance English

Division of Academic Assistance

ACAE 0097. Fundamentals of Effective Writing. 3 hours.

Covers major sentence and syntax errors and basic organization of paragraphs and short narrative and expository papers. Writing topics include personal and expository topics. Emphasis on drafting and revising. Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Not offered on a regular basis.

ACAE 0098. Basic Composition for Multilingual Writers. 3 hours.

Not open to students with credit in ACAE 0099.

For multilingual students only. Course covers elements of effective style, careful proofreading, logical organization, and convincing development of expository and persuasive essays. Emphasis on problems multilingual students typically experience with proofreading, revision, and writing for an American academic audience. Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

ACAE 0099. Basic Written Composition. 3 hours.

Not open to students with credit in ACAE 0098.

Covers elements of effective style, careful proofreading, logical organization, and convincing development of college-length expository and persuasive essays. Emphasis on proofreading, revision, and analytic and interpretive thinking and writing.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

(ACAM) Academic Assistance Math

Division of Academic Assistance

ACAM 0097. Intermediate Algebra I. 4 hours.

Concepts of fractions, decimals, percents, and signed numbers. Methods for solving first degree equations, systems, and related applications, and graphing linear equations.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

ACAM 0098. Intermediate Algebra II. 4 hours.

Concepts of factoring, functions, polynomials. Methods for solving second degree and rational equations and related applications. Operations regarding polynomials, exponents, and radicals.

Non-Traditional Format: This course carries institu-

tional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

ACAM 0099. Introduction to College Algebra. 4 hours. Concepts of factoring, exponents, polynomials, radicals, fractions, and graphing. Methods for solving equations: rational, first and second degree, absolute value, inequalities, and systems and their related applications.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

(ACAR) Academic Assistance Reading

Division of Academic Assistance

ACAR 0097. Academic Assistance Reading. 3 hours. College reading and vocabulary skills.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Not offered on a regular basis.

ACAR 0098. Developing Reading and Studying Fluency. 4 hours.

Critical reading and thinking skills, reading fluency, and vocabulary development.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

ACAR 0098L. Developing Reading and Studying Fluency Laboratory. 1 hour. One 1-hour lab period.

Computer instruction on reading rate and test preparation for Collegiate Placement Exam (CPE).

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

ACAR 0099. Reading and Studying in College. 3 hours.

Study strategies needed to be successful in college using content from a variety of disciplines, includes reading rate and vocabulary development.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation. Offered fall, spring, and summer semesters.

(ACCT) Accounting

Terry College of Business

ACCT 1120L. Principles of Accounting I Laboratory (Honors). 1 hour. One 1-hour lab period.

Not open to students with credit in ACCT 2101L.

Prerequisite: Permission of Honors.

Basic elements of financial accounting and the accounting environment.

Offered on a regular basis.

ACCT 1120H. Principles of Accounting I (Honors). 3 hours.

Not open to students with credit in ACCT 2101.

Prerequisite: Permission of Honors.

Financial accounting and the accounting environment. Students learn to record business transactions, post accounts, and prepare financial statements. The latitude given managers in preparing financial statements, and the role played by the external auditor in attesting statement presentations. A research project is required. Offered on a regular basis.

ACCT 1130H. Principles of Accounting II (Honors). 3 hours.

Not open to students with credit in ACCT 2102.

Prerequisite: ACCT 1120H and permission of Honors.

The analysis, interpretation, and reporting of managerial accounting information for management's use in operating a business. Concepts and methods, such as capital budgeting and break-even analysis, are related to other business disciplines. Offered on a regular basis.

ACCT 1160. Survey of Accounting. 3 hours.

Prerequisite: Permission of department.

The analysis and interpretation of financial statements commonly found in the private sector. Not open to Business Administration students. Offered on a regular basis.

ACCT 1160L. Survey of Accounting Laboratory. 1 hour. One 1-hour lab period.

Not open to students with credit in ACCT 2101L or ACCT 1120L.

Basic elements of financial and managerial accounting. Offered on a regular basis.

ACCT 2101. Principles of Accounting I. 3 hours.

Not open to students with credit in ACCT 1120H.

Basic accounting systems, concepts, and principles. The analysis and design of financial controls and the preparation, analysis, and interpretation of financial statements. Time value of money and ratio analysis are discussed as they relate to other disciplines such as finance and marketing. Offered on a regular basis.

ACCT 2101L. Principles of Accounting I Laboratory. 1 hour. One 1-hour lab period.

Discussion of basic accounting systems, concepts, and principles.

Offered on a regular basis.

ACCT 2102. Principles of Accounting II. 3 hours.

Not open to students with credit in ACCT 1130H.

Prerequisite: ACCT 1120H.

Basic managerial accounting systems, concepts, and principles. The analysis, interpretation, and reporting of cost data for management's decision making needs. Cost-volume-profit analysis, budgeting, and perfor-

mance reporting are discussed as they relate to other business disciplines.

Offered on a regular basis.

ACCT 4000. Accounting Information in a Multinational Setting. 3 hours.

Prerequisite: ACCT 1130H.

The use of domestic and international accounting information in the valuation of business enterprises and prediction of earnings, cash flow, and equity value. Offered on a regular basis.

ACCT 4400. Principles of Taxation for Non-Accountants. 3 hours.

Not open to students with credit in ACCT 5400/7400.

Prerequisite: ACCT 2101.

The principles of federal income taxation as they apply to individuals and business entities.

Offered on a regular basis.

ACCT 4990. Directed Study in Accounting. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ACCT 2102 and permission of school.

Directed study or research in the area of accounting.

Non-Traditional Format: Directed readings or study under the direction of a faculty member done independently of regularly scheduled classes.

Offered on a regular basis.

ACCT 4990H. Honors Thesis. 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual research leading to an honors thesis under the guidance of a thesis director.

Non-Traditional Format: Research project under the direction of a faculty member done independently of the regularly scheduled classes.

Offered on a regular basis.

ACCT 5000. Intermediate Accounting I. 3 hours.

Prerequisite: ACCT 2101 or ACCT 1130H.

Corequisite: ACCT 5710.

Accounting concepts, critical thinking skills, and techniques involved in the accounting process and the preparation of financial statements. Most asset categories and current and long-term liabilities. The financial statements from the perspective of both preparers and users. The accounting standard-setting process and the economic consequences of accounting standards on a firm's stakeholders.

Offered on a regular basis.

ACCT 5010. Intermediate Accounting II. 3 hours.

Prerequisite: ACCT 5000.

Corequisite: ACCT 5720.

A continuation of Intermediate Accounting I. Topics from accounting are reinforced with new topics concerning owners equity, earnings per share, accounting changes and errors, income taxes, pensions, leases, and other topics.

Offered on a regular basis.

Accounting

ACCT 5020. Intermediate Accounting III. 3 hours.

Prerequisite: ACCT 5010.

A continuation of Intermediate Accounting II.

Offered on a regular basis.

ACCT 5030/7030. Advanced Financial Accounting. 3 hours.

Prerequisite: ACCT 5020.

Application of accounting theory to complex business entities, including accounting for equity investments, business combinations, and international operations. Accounting for not-for-profit organizations. The preparation of consolidated financial statements, including the use of electronic spreadsheets.

Offered on a regular basis.

ACCT 5100/7100. Managerial Accounting I. 3 hours.

Prerequisite: ACCT 1130H.

The design of accounting systems to serve the internal needs of management with an emphasis on underlying theory. Product costing, including activity-based costing; budgeting and other planning applications, information for decision making, planning and control application for decentralized organizations.

Offered on a regular basis.

ACCT 5200/7200. Audit/Systems I. 3 hours.

Prerequisite: ACCT 5020 and ACCT 5100/7100.

Assurance services with focus on the audit of financial statements. The basic financial statement audit process is discussed including the concepts of evidence, materiality, and risk. The role of professional ethics and legal liability in the auditing profession.

Offered on a regular basis.

ACCT 5310/7310. Audit/Systems II. 3 hours.

Prerequisite: ACCT 2102.

Accounting information systems (AIS), including the role of such systems in an organization, electronic data processing, AIS applications, AIS analysis and design, AIS controls, and the audit of AIS.

Offered on a regular basis.

ACCT 5400/7400. Taxation I. 3 hours.

Prerequisite: ACCT 2102.

A basic federal income tax course covering concepts of taxation applicable to all taxable entities but primarily relating to individuals. Introduces research approaches to tax problems as well as methods of analysis most appropriate to taxation issues.

Offered on a regular basis.

ACCT 5410/7410. Taxation II. 3 hours.

Prerequisite: ACCT 5400/7400.

The federal taxation of business entities and owners, primarily focusing on corporations and shareholders. The tax provisions governing business entities, as well as the impact of those provisions on business decisions and choice of entity form.

Offered on a regular basis.

ACCT 5420/7420. Partnership Taxation. 3 hours.

Prerequisite: ACCT 5730/7730 and permission of department.

The fundamental tax and legal concepts involved in the income taxation of partnerships and partners.

Offered on a regular basis.

ACCT 5430/7430. Estate and Gift Taxations. 3 hours.

Prerequisite: ACCT 5730/7730 and permission of department.

The structure and fundamental concepts involved in estate and gift taxation and the income taxation of estates and trusts. Personal financial planning concepts are also introduced.

Offered on a regular basis.

ACCT 5440/7440. Corporate Tax I. 3 hours.

Not open to students with credit in ACCT 5410/7410.

Prerequisite: ACCT 5400/7400.

The federal taxation of business entities and owners, primarily focusing on corporations and shareholders, for students planning to pursue a concentration in taxation.

Offered on a regular basis.

ACCT 5710. Professional Accounting I. 1.5 hours.

Prerequisite: ACCT 2102.

Corequisite: ACCT 5000.

Areas of accounting emphasis and their pertinence to alternative accounting careers. Written assignments and discussion with speakers used to enhance communication skills.

Offered on a regular basis.

ACCT 5720. Professional Accounting II. 1.5 hours.

Prerequisite: ACCT 5000.

Corequisite: ACCT 5010.

Professional development and professional responsibilities of accountants in public and private practice.

Offered on a regular basis.

ACCT 5730/7730. Tax Policy and Research. 3 hours.

Prerequisite: ACCT 5400/7400 and permission of department.

Development of tax research tools and the development of an understanding of tax policy issues as they arise in social policy and professional accounting settings.

Offered on a regular basis.

ACCT 5740/7740. Accounting Policy and Research. 3 hours.

Prerequisite: ACCT 5200/7200 and permission of department.

Development of accounting research tools and an understanding of accounting policy issues as they arise in social policy and professional accounting settings.

Offered on a regular basis.

ACCT 5800/7800. Internship/Cooperative Education.

1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Applied professional experience or experience with the profession in another culture.

Non-Traditional Format: Relevant professional work experience that augments topics covered in regular classes.

Offered on a regular basis.

(ADPR) Advertising and Public Relations

College of Journalism and Mass Communication, Department of Advertising and Public Relations.

ADPR 3100. Principles of Advertising. 3 hours.

Advertising concepts, organization, and practices. Topics include advertising preparation and placement, research, and advertising's economic and social impact.

Offered fall, spring, and summer semesters.

ADPR 3110. Advertising Message Strategy. 3 hours.

Prerequisite: (ADPR 3100 or MARK 3000) and permission of department.

Strategy and execution of advertising copy and layout. Study of solutions of advertising/marketing communication problems through preparation of advertisements for a variety of media.

Offered fall, spring, and summer semesters.

ADPR 3120. Media Planning. 3 hours.

Prerequisite: ADPR 3100 and STAT 2210 or STAT 4210 or equivalent and permission of department.

Media planning and its role within the marketing function. Attention is directed toward the creative selection, scheduling, and evaluation of media vehicles to deliver advertising and promotion messages to target audiences in an effective and efficient manner.

Offered fall, spring, and summer semesters.

ADPR 3130. Advertising and Consumer Research. 3 hours.

Prerequisite: ADPR 3100 and STAT 2210 or STAT 4210 or equivalent and permission of department.

Advertising and consumer research techniques in strategic planning, message development, understanding consumer behavior, measurement of media audiences, and evaluation of advertising efforts and spending. Emphasis on theories of advertising response, consumer behavior, objective setting, and measurement of advertising effects.

Offered fall and spring semesters.

ADPR 3140. Advertising and Society. 3 hours.

Prerequisite: ADPR 3100 and permission of department.

Designed to foster a critical understanding of advertising and promotion as an institution, and its role in communication, society, culture, and our economy. Students develop a framework in which to understand the continuing dialogue between supporters and crit-

ics, and confront issues related to the institution's ethical conduct, regulatory issues, and social responsibility.

Offered fall and spring semesters.

ADPR 3520. Graphic Communications. 3 hours.

Printing processes, typography, photoengraving, layout and design, production planning, and related topics.

Offered fall, spring, and summer semesters.

ADPR 3850. Public Relations. 3 hours.

Principles and techniques of public relations. Research in interpersonal and mass communications with emphasis on effectiveness and studies among various publics.

Offered fall, spring, and summer semesters.

ADPR 4990H. Honors Thesis in Advertising and Public Relations. 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual research in advertising, public relations, and related communication fields under the direction of a sponsoring faculty member.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall and spring semesters.

ADPR 5010. Advertising and Public Relations Internship. 3 hours.

Prerequisite: Permission of department.

Supervised experience in advertising or public relations. Interns are required to work full time for sponsoring organizations and to complete a journal describing weekly assignments with examples of completed work. Performance is evaluated by representatives of the internship sponsor and by the assigned faculty supervisor.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

ADPR 5170. Advanced Studies in Advertising and Public Relations. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Senior standing and permission of department.

Independent study of any area of advertising, public relations, or related communications function. Students are responsible for finding a faculty sponsor. Written proposal outlining the area of study must be submitted and receive approval from the sponsoring instructor.

Non-Traditional Format: Independent study.

Offered fall, spring, and summer semesters.

ADPR 5710. Advertising and Communication Management. 3 hours.

Prerequisite: ADPR 3110, ADPR 3120, and ADPR 3130.

Managerial and decision making processes of advertising and related marketing communication functions. Emphasis on determining opportunities, integrating with other elements of the promotion mix, setting objectives, establishing budgets, and measuring advertising and communication effectiveness.
Offered fall and spring semesters.

ADPR 5740/7740. Advertising and Communication Campaigns. 3 hours.

Prerequisite: ADPR 5710 and permission of department.
Corequisite: ADPR 5710.

Managerial and decision-making processes in simulated situations with student groups functioning as advertising agencies to plan, implement, and manage advertising and communication campaigns for assigned clients.

Offered fall, spring, and summer semesters.

ADPR 5760. Direct and Interactive Advertising and Communications. 3 hours.

Prerequisite: ADPR 3110, ADPR 3120, and ADPR 3130.

Direct mail, direct response advertising, sales promotion, and interactive communication technologies. Attention is given to evaluating direct and interactive advertising and promotion strategies, the role and uses of new communication technologies, audience targeting, message design and creation, specialized media and message-delivery methods, and consumer databases.

Offered fall semester.

ADPR 5790/7790. Advertising Portfolio Seminar. 3 hours.

Prerequisite: ADPR 3110, ADPR 3120, and ADPR 3130 and permission of department.

Student production and development of an advertising portfolio of their best creative work with emphasis on both verbal and visual skills.

Offered spring semester.

ADPR 5910. Public Relations Administration. 3 hours.

Prerequisite: ADPR 3850 and JOUR 3410.

Operation and objectives of corporate public relations programs using the case study approach. Emphasis is given to relating the management function of decision making and policy formation to the communication process.

Offered fall and spring semesters.

ADPR 5920. Public Relations Communications. 3 hours.

Prerequisite: ADPR 5910, JOUR 3410, and permission of department.

Writing course designed to help the student understand news releases, feature stories, speeches, letters, scripts, cutlines, memoranda, and other tools basic to the practice of public relations. Emphasis will be placed

on the strategies and techniques behind public relations writing.

Offered fall, spring, and summer semesters.

ADPR 5950/7950. Public Relations Campaigns. 3 hours.

Prerequisite: ADPR 5910.

Research, planning, and preparation of an integrated public relations campaign. Campaigns will alternate among business, governmental, and organization problems.

Offered fall, spring, and summer semesters.

ADPR 5990. Seminar in Advertising and Public Relations. 3 hours.

Prerequisite: (Junior standing or senior standing) and permission of department.

Seminar designed to synthesize and integrate many of the theoretical and practical approaches to the study and application of advertising, public relations, and related communication fields. Emphasis is on critical thinking, analytical processes, and acquisition of specialized knowledge pertaining to the seminar topic.

Offered spring semester.

(ADSC) Animal and Dairy Science

College of Agricultural and Environmental Sciences, Department of Animal and Dairy Science

ADSC 2000-2000L. Practicum in Animal and Dairy Science. 2 hours.

One lecture and one 3-hour lab period. Care and techniques of farm animal management, handling, movement, restraint, and facilities needed for efficient and profitable animal production.

Offered fall and spring semesters.

ADSC 2010. Introductory Animal and Dairy Science. 3 hours.

Corequisite: ADSC 2010L.

Basic principles of breeding, feeding, and management of beef cattle, dairy cattle, sheep, swine, and horses.

Offered fall and spring semesters.

ADSC 2010L. Introductory Animal and Dairy Science Laboratory. 1 hour.

One 3-hour lab period.

Corequisite: ADSC 2010.

Basic principles of breeding, feeding, and management of beef cattle, dairy cattle, sheep, swine, and horses.

Offered fall and spring semesters.

ADSC 2300. Companion Animal Care. 2 hours.

Companion animal care with emphasis on nutrient requirements, digestion and absorption, commercial feeds, reproduction, diseases, parasites, behavior, and the animal role in human health and disease.

Offered spring semester.

ADSC 2630-2630L. Pleasure Horse Management. 2 hours. One lecture and one 2-hour lab period. Pleasure horse management, including conformation, breeds, nutrition, reproduction, diseases, behavior, and current issues of the equine industry. Offered fall semester.

ADSC 3010-3010L. Meat Merchandising. 2 hours. One lecture and one 3-hour lab period. The conversion of domestic livestock to retail and food service products. Emphasis on slaughter, fabrication, pricing, packaging, and sanitation technologies. Offered fall semester.

ADSC 3110. Introduction to Genetics of Livestock Improvement. 3 hours. Prerequisite: ADSC 2010 and ADSC 2010L and BIOL 1107-1107L. Genetics and statistics as related to the genetic improvement of farm animals. Offered fall semester.

ADSC 3180-3180L. Meats Judging I. 2 hours. Two 2-hour lab periods. Grading and evaluating beef, pork, and lamb carcasses and their wholesale cuts. Terminology to describe and detect differences among carcasses of the same species. Written reasons describing detectable differences. Offered fall semester.

ADSC 3190-3190L. Meats Judging II. 2 hours. Two 2-hour lab periods. Prerequisite: ADSC 3180-3180L or permission of department. Selecting and grading carcasses and wholesale cuts of beef, pork, and lamb. Terminology required to describe and detect differences among carcasses and primal cuts in addition to written reasons describing detectable differences. The meats judging team which represents the University in intercollegiate Meats Judging Contests will be selected from the students in this course. Offered spring semester.

ADSC 3200-3200L. Evaluation and Composition. 3 hours. One lecture and two 2-hour lab periods. Evaluation of livestock and their carcasses for composition and selection criteria for the breeding herd. Emphasis will be on development of value-determining traits and how they can be controlled to influence livestock value. Offered fall semester.

ADSC 3210-3210L. Livestock Evaluation and Selection. 2 hours. Two 2-hour lab periods. Prerequisite: ADSC 3200-3200L or permission of department. The selection of livestock for the breeding herd and for slaughter. The team representing the University in the annual Spring Intercollegiate Livestock Judging Contests will be chosen from the students in this course. Offered fall semester.

ADSC 3220-3220L. Advanced Livestock Evaluation and Selection. 2 hours. Two 2-hour lab periods. Prerequisite: ADSC 3210-3210L or permission of department. A continuation of Livestock Evaluation and Selection. The team representing the University in the annual Fall Intercollegiate Livestock Judging Contests will be chosen from the students in this course. Offered fall semester.

ADSC 3230-3230L. Light Horse Evaluation and Selection. 2 hours. Two 2-hour lab periods. Evaluation of horses relating to riding qualities and anatomical structure. Prerequisite for competing in collegiate horse judging contests. Offered spring semester.

ADSC 3250-3250L. Advanced Horse Evaluation and Selection. 2 hours. Two 2-hour lab periods. Prerequisite: ADSC 3230-3230L. Evaluation of conformation and performance of various breeds. Teams will be selected to compete in intercollegiate horse judging contests. Offered fall semester.

ADSC 3260-3260L. Dairy Cattle Evaluation and Selection. 2 hours. Two 2-hour lab periods. Principles and practices concerned with the evaluation of type in dairy cattle, with special emphasis on show ring judging. Offered spring semester.

ADSC 3270-3270L. Advanced Dairy Cattle Evaluation and Selection. 2 hours. Two 2-hour lab periods. Prerequisite: ADSC 3260-3260L. A continuation of Dairy Cattle Evaluation and Selection. The University will be represented at national intercollegiate judging contests in the fall by students chosen from this course. Offered fall semester.

ADSC 3300-3300L. Animal Nutrition and Metabolism. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: ADSC 2010 and ADSC 2010L and [(CHEM 2100 and CHEM 2100L) or (CHEM 2211 and CHEM 2211L)]. Animal nutrition and metabolism. The chemical composition of nutrients, biochemical reactions and their regulation as related to the metabolic pathways associated with the assimilation of nutrients and application of these concepts in the growth and performance of animals of economic importance. Offered fall semester.

ADSC 3310-3310L. Feeds and Feeding. 2 hours. One lecture and one 3-hour lab period. Prerequisite: ADSC 3300-3300L. Composition and properties of feedstuffs and application of principles of nutrition in the use of these feedstuffs in feeding livestock. Offered spring semester.

Animal and Dairy Science

ADSC 3320. Animal Nutrition and Feeding. 3 hours. Not open to students with credit in ADSC 3300-3300L or ADSC 3310-3310L.

Animal nutrition followed by feed identification and ration formulation. This course is designed for non-animal science majors.
Offered spring semester.

ADSC 3400-3400L. Physiology of Reproduction in Farm Animals. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ADSC 2010 and ADSC 2010L and BIOL 1108-1108L.

Physiology of reproduction in farm animals.
Offered fall semester.

ADSC 3420. Physiology of Lactation in Farm Animals. 2 hours.

Prerequisite: BIOL 1108-1108L.

The anatomy, physiology, and function of the mammary gland of farm animals.

Offered spring semester.

ADSC 3600-3600L. Beef Cattle Production and Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Two of the following: ADSC 3110 or ADSC 3310-3310L or ADSC 3400-3400L.

Breeding, feeding, and management of beef cattle.
Offered spring semester.

ADSC 3610-3610L. Pork Production and Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Two of the following: ADSC 3110 or ADSC 3310-3310L or ADSC 3400-3400L.

Breeding, feeding, and management of swine.
Offered fall semester.

ADSC 3620-3620L. Dairy Cattle Production and Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: Two of the following: ADSC 3110 or ADSC 3310-3310L or ADSC 3400-3400L.

Effects of environment and its interactions with physiology and inheritance upon performance of the cow and the cost of producing milk. This includes the effects of climate, health, sanitation, forage systems, housing, equipment, and waste management.

Offered fall semester.

ADSC 3630-3630L. Horse Production and Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: Two of the following: ADSC 3110 or ADSC 3310-3310L or ADSC 3400-3400L.

Breeding, feeding, and management of horses.
Offered spring semester.

ADSC 3640-3640L. Sheep and Goat Production and Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Two of the following: ADSC 3110 or ADSC 3310-3310L or ADSC 3400-3400L.

Breeding, feeding, and management of sheep and goats.
Offered spring semester.

ADSC(FDST) 3650-3650L. Introductory Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Meat science focusing on the meat industry, role of muscle foods in the human diet, meat inspection, muscle structure and function, conversion of muscle to meat, anatomy, factors influencing meat quality, meat processing, and meat safety and quality control.

Offered spring semester.

ADSC 3700. Special Problems in Animal and Dairy Science. 2-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Individual study, readings, and research projects in laboratories or on experimental farms involving animal or meat-related topics.

Non-Traditional Format: Special problems course; students and faculty set times as needed.

Offered fall, spring, and summer semesters.

ADSC 3810. Animal and Dairy Science Orientation. 1 hour. One 1-hour lab period.

Areas of specialization with programs of study, course offerings, career opportunities, and leaders in related Animal and Dairy Science businesses.

Offered fall and spring semesters.

ADSC 3830. Equine Science Seminar. 1 hour. One 1-hour lab period.

Industry awareness and exploration of various topics associated with equine health and production.

Offered fall and spring semesters.

ADSC 3910. Internship in Animal and Dairy Science. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Work experiences in livestock production and management, agribusiness or service organizations.

Non-Traditional Format: Internships require students and faculty to hold discussions on non-traditional schedules.

Offered fall, spring, and summer semesters.

ADSC 4010. Issues in Animal Agriculture. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ADSC 3600-3600L or ADSC 3610-3610L or ADSC 3620-3620L or ADSC 3630-3630L or ADSC 3640-3640L.

Impact of livestock production on society and the environment; role of animal products in the human diet; ecological aspects of animal production, animal welfare, media relations.

Offered spring semester.

ADSC 4100/6100. Advanced Genetics of Livestock Improvement. 3 hours.

Prerequisite: ADSC 3110 or permission of department. The development of practical and genetically sound programs involving the study and application of genetic principles underlying selection, systems of mating, and performance testing. Major emphasis will be on characters of economic importance in meat animals. Not offered on a regular basis.

(ADSC)FDST 4140/6140-4140L/6140L. Advanced Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L and FDST 4040/6040-4040L/6040L.

Meat processing and technology, scientific basis for meat as a food, USDA and FDA regulations governing meat processing, and the latest innovations in commercial meat processing. Offered spring semester.

ADSC 4150/6150. Microbial Ecology of the Rumen. 3 hours.

Prerequisite: BCMB 4020/6020 or MIBO 4090/6090 or permission of department.

The rumen microbial ecosystem that will examine the biochemistry, ecology, nutrition, physiology, and taxonomy of rumen microorganisms. The symbiotic relationship between rumen microorganisms and the nutrition of the ruminant animal. Manipulation of rumen fermentation to maximize host-animal production. Offered spring semester of odd-numbered years.

ADSC 4200. Livestock Merchandising. 2 hours.

Prerequisite: ADSC 3600-3600L or ADSC 3610-3610L or ADSC 3620-3620L or ADSC 3630-3630L.

Principles and activities involved in successfully promoting and merchandising livestock. Presentations by industry leaders in the field of livestock merchandising. A livestock auction will be held at the conclusion of the course.

Offered fall semester.

ADSC 4300. Food Animal Growth and Development. 3 hours.

Prerequisite: ADSC 3300-3300L or BCMB (BIOL)(CHEM) 3100 or permission of department.

Physiological, nutritional, and genetic regulation of growth, development, and body composition in food animals. Emphasis will be placed on skeletal muscle, adipose tissue, and bone development, as it relates to the whole-body growth and composition.

Offered spring semester.

(ADSC)ANNU 4360/6360. Ruminant Nutrition. 3 hours.

Prerequisite: ADSC 3300-3300L and BCMB (BIOL)(CHEM) 3100.

Digestive physiology and metabolism of the rumen. Treats systematically the diversity of function, complex symbiotic relationships of the rumen microflora/micro-

fauna, and the physiology and metabolism of the rumen as related to digestion, absorption, and utilization of nutrients.

Offered every year on a regular basis.

(ADSC)(POUL)ANNU 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: [ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM) 3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine.

Offered fall semester.

ADSC 4400/6400-4400L/6400L. Applied Reproduction in the Horse. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ADSC 3400-3400L.

Management of reproduction in the horse for efficient production. Application of reproductive management systems.

Offered spring semester.

ADSC 4410/6410-4410L/6410L. Applied Reproductive Management in Cattle and Swine. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ADSC 3400-3400L.

Management of reproduction in farm animals for efficient livestock production. Application of reproductive management, principles associated with artificial insemination, embryo transfer, pregnancy detection, semen collection, and reproductive record management.

Offered fall semester.

ADSC 4500-4500L. Operant Conditioning and Training of Horses. 3 hours. Three 2-hour lab periods.

Prerequisite: ADSC 3630-3630L or permission of department.

Behavior modification principles applied to training young horses.

Offered spring semester.

(AFAM) African American Studies

College of Arts and Sciences

AFAM 2000. Introduction to African American Studies. 3 hours.

Cultural, social, and historical movements among Americans of African descent.

Offered fall and spring semesters.

(AFAM)RELI 2005. African American Religions: An Introduction. 3 hours.

Major and selected contemporary religious groups and movements among African Americans.

Offered every year on a regular basis.

African American Studies

(AFAM) SOCI 2020. African American Society. 3 hours.

The class, status, and power relations of African Americans as part of both the United States social structure and the African diaspora.

Offered every year on a regular basis.

(AFAM) PSYC 2150. Understanding Cultural Diversity. 3 hours.

Cross-cultural psychology, including an examination of issues such as conformity, leadership, and attributional style as they vary across different cultures, with consideration of their implications for the emerging world.

Not offered on a regular basis.

(AFAM) SPCM 2810. Communication in African American Communities. 3 hours.

Not open to students with credit in SPCM (AFAM) 4810.

Rhetorical strategies and patterns of orality in African American communication, communication styles in conflict, and skill development for cultural interaction.

Offered spring semester.

(AFAM) SOCI 2820. Race and Ethnicity in America. 3 hours.

The causes and consequences of race and ethnic discrimination in America, with a focus on ethnic competition and conflict.

Offered every year on a regular basis.

(AFAM) MUSI 2960. African American Percussive Music: From Africa to the Americas. 3 hours. Repeatable for maximum 6 hours credit.

Traditional and contemporary African American percussion music beginning with its African heritage and tracking its development throughout the Americas, with particular emphasis on the United States. Teaching/learning strategies include in-class performance, demonstrations, audiovisuals, and lectures. No previous music performance background is required.

Offered fall and spring semesters.

(AFAM) RELI 3000. The Bible in the Third World. 3 hours.

Prerequisite: RELI 1001 or RELI 1002 or permission of department.

Interpretations of the Bible in Africa, Asia, Central and South America and the influence upon minority communities in the United States.

Offered every even-numbered year on a regular basis.

AFAM (PSYC) 3150. Introduction to Black Psychology. 3 hours.

Prerequisite: Permission of department.

Deconstruction of traditional thought, behavior, and development as well as reconstruction of the same on contemporary terms; testing of nuances and varieties of multicultural and indigenous models. The designs and

projected future of the Black Psychology Movement. Not offered on a regular basis.

(AFAM) ENGL 3230. Development of African American Literature. 3 hours.

Prerequisite: Permission of department.

African American literature since 1773, particularly 1830 to the present: Frederick Douglass, Harriet Jacobs, Zora Neale Hurston, Langston Hughes, Richard Wright, Dorothy West, Ralph Ellison, James Baldwin, Alice Childress, Lorraine Hansberry, Amiri Baraka, Toni Morrison, Alice Walker, and August Wilson, including diverse voices rooted in the folk origins for literary forms.

Offered every year on a regular basis.

(AFAM) SOCI 3300. Global Perspectives on Racism and Sexism. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Race and gender relations and discrimination around the globe; the origins and practice of race and gender domination and empowerment in the Americas, Africa, Asia, Europe, the Middle East, and the Pacific Rim.

Offered every even-numbered year on a regular basis.

(AFAM) SOCI 3310. Race and Culture. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Evolution of cultures among racial groups as part of, and in contrast to, Western civilization. Particular attention is given to the ways race and culture intersect to provide styles, practices, and patterns of living for individuals in contemporary society.

Not offered on a regular basis.

AFAM 3880. African American Folklore. 3 hours.

Prerequisite: ENGL 3010 or permission of department.

African American folk expressions: their functions and their relationships with folk expressions of other peoples. Folk speech (proverbs, riddles, signifying, playing the dozens), folk narrative (animal tales, slave stories, modern legends, jokes, toasts, rap songs), folk songs (African songs, gospel songs, work songs, ballads, blues songs).

Not offered on a regular basis.

AFAM (POLS) 4200. African American Social Change. 3 hours.

Prerequisite: POLS 1101-1010D and AFAM 2000.

African American social movements, principally those in the United States, such as the convention and colonizing movements of the nineteenth century and the Civil Rights and Black Power movements of the twentieth century.

Not offered on a regular basis.

(AFAM) RELI 4201/6201. African American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The religious traditions of African Americans from Colonial times to the present; major religious movements, personalities, and ideas and their relationship to various aspects of American culture.
Offered every odd-numbered year on a regular basis.

(AFAM) RELI 4202/6202. Southern Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The origins, growth, and current practices of religion in the American South. The interaction between religion and other aspects of Southern culture, such as racial and gender concerns, education, Darwinian science, temperance, and politics.

Offered every even-numbered year on a regular basis.

(AFAM) RELI 4203/6203. The Bible in the Black Church. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Biblical interpretation in black America from 1865 to the present.

Offered every even-numbered year on a regular basis.

AFAM 4250. African American Seminar. 3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: (AFAM 2000 and AFAM 3880) or AFAM(POLS)4200.

Recurring topics and themes in African American life from the perspective of the behavioral sciences and humanities.

Not offered on a regular basis.

(AFAM) SOCI 4370. Seminar in Race and Ethnicity. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Special topics in race and ethnicity for advanced undergraduates.

Not offered on a regular basis.

AFAM (DRAM) 4490/6490. African American Women in Cinema: Image and Aesthetics. 3 hours.

Prerequisite: Permission of department.

Selected films by and about African and African American women. A historical/critical overview of the presentation of these women in cinema with emphasis on contemporary African and African American women filmmakers.

Not offered on a regular basis.

AFAM (PSYC) 4500/6500. Psychology of Prejudice. 3 hours.

Prerequisite: (PSYC 1101 or SOCI 1101) and senior standing.

Motivational, cognitive, social, and cultural factors that lead to discrimination in our society and various perspectives found in the research on discrimination.

Not offered on a regular basis.

AFAM (PSYC) 4550/6550. Classic Studies in Black Psychology. 3 hours.

Prerequisite: AFAM(PSYC) 3150 or permission of department.

Studies which have had major social or scientific impact on the lives of Black Americans and the way black people have been viewed within psychology. Approach is historical and interdisciplinary.

Not offered on a regular basis.

(AFAM) ENGL 4620. African American Poetry. 3 hours.

Prerequisite: Permission of department.

African American poetry from the colonial period to the present, including slave and folk songs of the mid-nineteenth century, the Harlem Renaissance of the 1920's, and contemporary poetry. Emphasis on such figures as Langston Hughes, Margaret Walker, Gwendolyn Brooks, Sonia Sanchez, Amiri Baraka, and others.

Offered every year on a regular basis.

(AFAM) ENGL 4630. African American Fiction. 3 hours.

Prerequisite: Permission of department.

Important African American stories and novels from the nineteenth and twentieth centuries, including works by such authors as Frances Harper, Jean Toomer, Ralph Ellison, James Baldwin, Alice Walker, and Toni Morrison.

Offered every year on a regular basis.

(AFAM)SPCM4810. African American Rhetoric and Communication. 3 hours.

The history and criticism of the communication of African American speakers, with emphasis upon oral rhetoric relating to social-political development since 1860.

Offered fall semester of odd-numbered years.

AFAM 4850. Directed Major Projects in African American Studies. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

An independent directed course for advanced undergraduate students with a major interdisciplinary project that goes beyond the disciplinary boundaries of a traditional department. The student has two major projects, one each for Georgia State Leadership, through the Fanning Center, and the Washington Center's Minority Leadership Fellowship Program.

Non-Traditional Format: Besides a 20 page paper of revised excellence, a practicum for the project (two months study in The Washington Center's Minority Leader Fellowship Program, for example) will complete a very rigorous enrichment through out-of-class learning.

Not offered on a regular basis.

(AFAM) ENGL 4880. Topics in African American Literature. 3 hours.

Prerequisite: Permission of department.

Selected topics in African American literature such as African American autobiography, Harlem Renaissance, Gwendolyn Brooks and Richard Wright, and Black American literature and aesthetics.

Offered every year on a regular basis.

(AGCM) Agricultural Communications

College of Agricultural and Environmental Sciences, Department of Agricultural Communications

AGCM3910. Internship in Agricultural Communication. 2-6 hours. Repeatable for maximum 6 hours credit. Experiential and applied learning in an agricultural communication organization.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

AGCM4000. Special Problems in Agricultural Communication. 1-3 hours. Repeatable for maximum 3 hours credit.

Directed study of topic applicable to student's program of study.

Non-Traditional Format: Students will work independently on individual topics.

Offered fall, spring, and summer semesters.

(AGRI) Agriculture

College of Agricultural and Environmental Sciences

AGRI 1010. Orientation to Agriculture. 1 hour.

Designed to assist College of Agricultural and Environmental Sciences undecided freshmen and transfers in deciding on a major, and to provide information related to campus services and activities.

Offered fall and spring semesters.

AGRI 3000. Agricultural Leadership and Organizational Skills. 3 hours.

Leadership, group process, and problem solving techniques needed when working with agricultural procedures, organizations, and related personnel.

Offered spring semester of odd-numbered years.

AGRI 3150. Topics in International Agriculture. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Junior standing or permission of department.

Individual or group study through reading and/or research of selected topics in international agriculture.

Non-Traditional Format: Students will work independently on individual topics and turn in a paper at the end of the semester. No formal class time is required.

Offered fall, spring, and summer semesters.

AGRI 3910. International Agriculture Internship. 1 hour.

Prerequisite: Junior standing or permission of department.

Placement with an international public or private organization in a foreign country. If located near a university, student may also enroll in a course.

Non-Traditional Format: Internship abroad.

Offered fall, spring, and summer semesters.

(AGRI) EETH 4190/6190. Agricultural Ethics. 1 hour. One 2-hour lab period.

Ethical issues in agriculture. Topics include animal rights/animal welfare, agriculture as a business/agriculture as a way of life, sustainable agriculture (bio)technology, migrant farm workers, foreign aid world hunger, and related topics.

Offered fall and spring semesters.

AGRI 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or research projects under the direction of a faculty director.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall, spring, and summer semesters.

AGRI 4990H. Honors Thesis. 3 hours.

Prerequisite: Senior standing and permission of Honors.

Honors thesis under the guidance of a faculty member.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall, spring, and summer semesters.

AGRI 5050. Communication in the Agricultural Professions. 3 hours.

Theory and skill development of effective communication strategies for success in agricultural professions. Organizational, team, and interpersonal contexts with special focus on diversity issues, communication for change, enhancing the perception of agriculture, and effects of communication technology on information dissemination.

Not offered on a regular basis.

(AIRS) Aerospace Studies

Division of the Armed Services, Department of Aerospace Studies

AIRS 1001. The Air Force Today I. 2 hours. One lecture and one 2-hour lab period.

The Air Force in the contemporary world. Study of total force structure, strategic offensive and defensive forces, general purpose forces, and aerospace forces. Introduces tactical air forces and operations, and aerospace

support forces. Leadership laboratory activities are included.

Offered fall semester.

AIRS 1002. The Air Force Today II. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: AIRS 1001 or permission of department. Continues study of tactical air forces and operations, counterinsurgency and special operations, and aerospace support forces. Aerospace defensive forces, including manned aircraft and missile defensive forces. Introduction to Army, Navy, and Marine general purpose forces. Leadership laboratory activities are included.

Offered spring semester.

AIRS 2001. Development of Air Power I. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: AIRS 1002 or permission of department. Development of air power from balloons and dirigibles up to the Korean War. Students gain an understanding of the use of air power and the technological changes occurring during this period. Leadership laboratory activities are included.

Offered fall semester.

AIRS 2002. Development of Air Power II. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: AIRS 2001 or permission of department. Continues the study of air power following the Korean War. It deals with the peaceful employment of United States air power in relief missions and civic action programs and the air war in South East Asia. Leadership laboratory activities are included.

Offered spring semester.

AIRS 3001. Defense Management and Administration I. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: AIRS 2002 or permission of department. Emphasizes the individual as a manager in an Air Force environment. Individual motivation and behavioral processes, leadership, communication and group dynamics provide a foundation for the development of the junior officer's professional skills as an Air Force officer. Basic managerial processes involving decision making, utilization of analytic aids in planning, organizing, and controlling in a changing environment.

Offered fall semester.

AIRS 3002. Defense Management and Administration II. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: AIRS 3001 or permission of department. Managerial and leadership problems found in industry and government. Actual Air Force cases are used to enhance the learning and communication process. Organizational and personal values, management of forces in change, managerial strategy and tactics. Application of learned theories to potential problems the new officer may encounter.

Offered spring semester.

AIRS 4001. National Security Forces in Contemporary American Society I. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: AIRS 3002 or permission of department. The evolution and formulation of American national security policy, especially as it concerns the military instrument of national power. Examines selected regional security issues. Impact of technological and international developments on strategic preparedness: nuclear, limited, and low-intensity conflicts; arms control and peacekeeping. Examines the military officer's role in national security.

Offered fall semester.

AIRS 4002. National Security Forces in Contemporary American Society II. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: AIRS 4001 or permission of department. Role of professional military officer in carrying out national policy; traditional and contemporary aspects of professionalism; and professional relationships and ethics. The military legal system is introduced. Finalizes the student's preparation for commissioning and active duty Air Force service.

Offered spring semester.

(ANNU) Animal Nutrition

College of Agricultural and Environmental Sciences

ANNU(ADSC) 4360/6360. Ruminant Nutrition. 3 hours.

Prerequisite: ADSC 3300-3300L and BCMB (BIOL)(CHEM)3100.

Digestive physiology and metabolism of the rumen. Treats systematically the diversity of function, complex symbiotic relationships of the rumen microflora/microfauna, and the physiology and metabolism of the rumen as related to digestion, absorption, and utilization of nutrients.

Offered every year on a regular basis.

(ADSC) ANNU (POUL) 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: [ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM)3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine.

Offered fall semester.

(ANTH) Anthropology

College of Arts and Sciences, Department of Anthropology

ANTH 1102. Introduction to Anthropology. 3 hours.

Not open to students with credit in ANTH 2120H.

Variation in human culture and biology from the earliest

Anthropology

beginnings to the present, including relationships between human biology, culture, and the environment, and an understanding of contemporary cultural differences.

Offered fall, spring, and summer semesters.

(ANTH)CLAS 2000. Introduction to Classical Archaeology. 3 hours.

Concepts and principles of archaeology, including site formation, survey and excavation techniques, artifact retrieval and analysis, chronology, archaeological theory, and contemporary issues such as "ownership" of the past; focus on sites from Greek and Roman antiquity.

Offered fall, spring, and summer semesters.

ANTH 2070H-2070L. Culture and Human Biology (Honors). 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of Honors.

The biological bases of human social and cultural behavior from the perspective of biological anthropology. Includes instruction in laboratory methods. Evolutionary history, primate behavior, and human biological diversity will be applied to understanding the inter-relationship of biology, culture, and society.

Not offered on a regular basis.

(ANTH)(CMLT)GEOG(HIST)(SOCT) 2100. Introduction to Africa. 3 hours.

The history, physical environment (landforms, vegetation, and climate), and sociocultural environment (artistic, political, and social development) of Africa.

Offered fall semester.

ANTH 2120H. Introduction to Anthropology (Honors). 3 hours.

Not open to students with credit in ANTH 1102.

Prerequisite: Permission of Honors.

Variation in human culture and biology from the earliest beginnings to the present, including relationships between human biology, culture, and the environment, and an understanding of contemporary cultural differences.

Offered fall and spring semesters.

ANTH 2310. Archaeology of Georgia. 3 hours.

Prerequisite: ANTH 1102 or permission of department. Twelve thousand years of life in Georgia with an emphasis on relationships to the environment. Examines lifeways of prehistoric and early historic peoples, and the history of Georgia archaeology.

Not offered on a regular basis.

(ANTH)(BTNY) PATH 3010. Fungi: Friends and Foes. 3 hours.

Impact of fungi on human affairs. Historical and current uses of fungi by humans as well as the roles of fungi in various ecosystems.

Offered spring semester.

ANTH 3060. Introduction to Paleoanthropology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of department. Paleoanthropology as the integrative biocultural study of early human evolution, drawing on human paleontology and paleolithic archaeology to give a holistic understanding of the transitions leading to *Homo Sapiens*. Not offered on a regular basis.

ANTH (LING) 3080. Anthropology of Language. 3 hours.

Prerequisite: ANTH 1102 or LING 2100 or permission of department.

Anthropological studies in language, including origins and evolution, prehistory, geographical distribution, typology and classification, language and speech communities. Relationships between language and culture, language and society, and language and environment will be emphasized.

Not offered on a regular basis.

ANTH 3090. Evolution of Human Ecosystems. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of department. Prehistoric and historic human ecosystems, from hunting and gathering to states and empires, viewed from a biocultural perspective. Changing human-environment relations over the past 10,000 years. Course may be taken through UGA Studies Abroad program in Oxford, England.

Not offered on a regular basis.

ANTH 3100. Peoples of the World. 3 hours.

Prerequisite: ANTH 1102 or permission of department. The way of life of a number of societies from around the world, including hunting and gathering bands, farming and herding tribes and chiefdoms, and pre-industrial states and peasantry.

Not offered on a regular basis.

(ANTH)CMLT 3180. Introduction to East Asian Cultures. 3 hours.

Cultures of China, Japan, Korea, and Vietnam, with emphasis on the formation of Chinese culture and its diffusion and variation within the other national groups.

Not offered on a regular basis.

ANTH 3220. Introduction to Prehistoric Archaeology. 3 hours.

Prerequisite: ANTH 1102 or permission of department. Basic concepts and principles of archaeology. Topics covered include history of archaeology, site formation processes, survey and excavation techniques, artifact typology and analysis, chronology, activity analysis, and general archaeological theory.

Not offered on a regular basis.

ANTH 3250. Old World Archaeology. 3 hours.

Prerequisite: ANTH 1102 or permission of department. Cultural developments in the Old World from the first hominid to the beginnings of urban civilization. Empha-

sis on bio-cultural and environmental adaptation in prehistory.
Not offered on a regular basis.

ANTH 3260. The Aztecs and the Maya. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Two indigenous urban societies of the Americas, from farming village beginnings to the Spanish conquest, and their lasting impact on modern middle American culture. Topics include ecology, economy, political organization, urbanism, militarism, beliefs, art, architecture, and literature.
Not offered on a regular basis.

ANTH 3270. New World Archaeology. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Cultural variation in the Americas from the end of the Pleistocene to the time of intensive European contact, with emphasis on human/environmental interactions.
Not offered on a regular basis.

ANTH 3280. Archaeology of the Southwest. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Change and continuity in human life in North America's greater southwest, from the end of the Pleistocene to the twentieth century.
Not offered on a regular basis.

ANTH 3410. Contemporary Native America. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Cultural diversity of contemporary Native American tribes of the United States, Canada, and Mexico, including lifestyles, politics, literature, music, art, and socioeconomic conditions.
Not offered on a regular basis.

ANTH 3430. Indians of Mexico and Central America. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
The native peoples of Mexico and Central America, including their past, traditional culture, and problems they face in the modern world.
Not offered on a regular basis.

(ANTH) (BTNY) HORT 3440. Herbs, Spices, and Medicinal Plants. 2 hours.
Historical and contemporary significance of herbs, spices, and medicinal plants in human culture and commerce; chemical and biological characteristics; commercial production techniques; application in modern and traditional medical systems.
Offered fall semester.

(ANTH) (POLS) SOCI 3450. Sociopolitical Ecology. 3 hours.
Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.
The relationship between humans and their environment; ecological and social theories about environmental policies and problems. Course may be taken through UGA Studies Abroad program in GLOBIS.
Offered every year on a regular basis.

ANTH 3530. Anthropology of Folk Medicine. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
A contrast of indigenous medical knowledge and practitioners with ancient formal systems of medicine and modern biomedicine, including medical pluralism in multi-ethnic societies, and the political economy of medicine.
Not offered on a regular basis.

ANTH 3540. Multicultural Health Care. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Multicultural diversity of beliefs and practices about health and illness of ethnic groups in the United States as it impacts on health care. Specific consideration of African Americans, Hispanic Americans, Native Americans, and Asian Americans.
Not offered on a regular basis.

ANTH 4000/6000. Anthropology of Economic Systems. 3 hours.
Prerequisite: ANTH 1102 or permission of major.
Models and methods used by anthropologists to study production, distribution, and consumption of goods in subsistence and market economies. Topics from the ethnographic literature include feasting, money, managing commons, pre-capitalist markets, and capitalist penetration of subsistence economies.
Not offered on a regular basis.

ANTH 4020/6020. Indians of North America. 3 hours.
Prerequisite: ANTH 1102 or permission of major.
North American Indian cultures at the time of European contact. Additional topics include origin and development of Indian culture, impact of European contact on native cultures, and problems faced by Native Americans today.
Not offered on a regular basis.

ANTH 4040/6040. Visual Anthropology. 3 hours.
Prerequisite: ANTH 1102 or permission of major.
Anthropological uses of film, video, and photographs in field research and in the presentation of research results, especially in relation to portrayal of indigenous people.
Not offered on a regular basis.

ANTH 4050/6050. Cultural Anthropology. 3 hours.
Prerequisite: ANTH 1102 or permission of major.
The analysis and cross-cultural comparison of human institutions.
Not offered on a regular basis.

ANTH 4070. Cultural Ecology. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
The influence of the environment on human behavior and analysis of common adaptive responses among human populations to particular environments, emphasizing the role of culture in the ecological process.
Not offered on a regular basis.

Anthropology

ANTH(LING) 4090/6090. Cognitive Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major.

Folk systems of knowledge, with an emphasis on how people in different societies culturally identify, define, label, and classify phenomena such as color terms, plants, animals, and other environmental resources. Not offered on a regular basis.

ANTH 4200/6200. Field Methods in Archaeology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Corequisite: ANTH 4240/6240.

Archaeological reconnaissance, survey, excavation, laboratory preparation and analysis of collected materials.

Non-Traditional Format: This course is taught in the field at an archaeological site, followed by laboratory preparation and analysis of collected materials. Contact hours exceed the average of three hours per week.

Not offered on a regular basis.

ANTH(ECOL) 4210/6210. Zooarchaeology. 3 hours.

Prerequisite: ANTH 1102 or BIOL 1104-1104L or BIOL 1108-1108L or permission of major.

Animal remains recovered from archaeological sites, studied in light of zoological and archaeological methods and theories and interpreted in terms of human and animal behavior.

Not offered on a regular basis.

ANTH 4240/6240. Laboratory Methods in Archaeology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of major.

Corequisite: ANTH 4200/6200.

Environmental, chronological, preservational, and analytical methods and techniques of archaeological research.

Non-Traditional Format: This course is taught in the field at an archaeological site. Many more contact hours are involved beyond an average of three per week.

Not offered on a regular basis.

ANTH(ECOL) 4290/6290. Environmental Archaeology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of major.

Prehistoric and historic human subsistence patterns through the methods and techniques of zooarchaeology, paleobotany, and paleonutrition. Theories of environmental reconstruction.

Not offered on a regular basis.

ANTH (BTNY) 4300/6300-4300L/6300L. Ethnobotany. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major.

Ethnobotanical research, with focus on knowledge and utilization of the plant world in traditional societies. Comparisons of societies in tropical forest ecosystems and evaluation of issues relating to intellectual property rights and traditional peoples' knowledge of plant species with potential economic value.

Not offered on a regular basis.

ANTH 4310/6310. Archaeology of Eastern North America. 3 hours.

Prerequisite: ANTH 3220 or permission of major.

Prehistoric and early historic aboriginal cultural variation in Eastern North America.

Not offered on a regular basis.

(ANTH)GEOL 4340/6340. Archaeometry. 3 hours.

Prerequisite: GEOL(ANTH) 4700/6700.

Methods of archaeometric analysis including chronometric and instrumental techniques. Absolute age dating and characterization of archaeological materials by physico-chemical analysis.

Offered spring semester of even-numbered years.

ANTH(HIST) 4470. The Rise and Fall of the Southeastern Chiefdoms. 3 hours.

Prerequisite: ANTH 1102 or permission of department.

Development of the native societies of the southeastern United States, the exploration of the area by Spain in the sixteenth century, and the consequences of the meeting of the two peoples.

Not offered on a regular basis.

ANTH 4480. The Indians of the Old South. 3 hours.

Prerequisite: ANTH 1102 or permission of department.

Native peoples of the southern United States from the beginnings of the Spanish missions and the English deerskin trade through Indian removal.

Not offered on a regular basis.

ANTH 4540/6540-4540L/6540L. Environment and Health. 3 hours. Two lectures and one 2-hour lab period.

Bio-cultural medical anthropology focusing on the interaction among environment, biology, culture, and society as determinants of health and health problems. Not offered on a regular basis.

ANTH 4550/6550. Ethnohistory. 3 hours.

Prerequisite: ANTH 1102 or permission of major.

The methods used by anthropologists to reconstruct the history of preliterate societies from archaeological evidence, documentary evidence, and oral traditions. The ethnohistory of southeastern United States.

Not offered on a regular basis.

ANTH 4560/6560. Anthropology of Development. 3 hours.

Prerequisite: ANTH 1102 or permission of major.

Relationships among development, culture and environment from the world system perspective. Concepts of dependence, hegemony, inequality, and resistance are brought to bear in exploring interlinkages between (and among) underdevelopment, resource exploitation, and local autonomy and self-reliance.

Not offered on a regular basis.

ANTH 4570/6570. Maritime Anthropology. 3 hours.

Prerequisite: ANTH 1102 or permission of major.

Coastal and marine regions of the world in terms of human occupation, resource utilization, social organi-

zation, and human-environmental relationships. Identification of issues in traditional and contemporary management of coastal and marine ecosystems. Not offered on a regular basis.

ANTH 4580/6580-4580L/6580L. Ecology of Food, Diet, and Nutrition. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major. The impact of cultural behavior on the acquisition, preparation, and consumption of potentially edible natural resources.

Not offered on a regular basis.

ANTH 4590/6590. Ecology and Evolution of Human Disease. 3 hours.

Prerequisite: Undergraduate level only: (ANTH 1102 and BIOL 1104-1104L) or permission of major; Graduate level only: ECOL(BIOL) 3500-3500L or permission of major.

Ecological, evolutionary, and biocultural aspects of human disease. Subjects include the ecology of infectious/parasitic disease pathogens and their human hosts, the evolution of human host-pathogen interactions, the impact of cultural and demographic change in human populations, and the effects of global environmental change on human disease patterns.

Not offered on a regular basis.

ANTH 4630/6630. Field Methods in Cultural Anthropology. 6 hours. Repeatable for maximum 12 hours credit.

Prerequisite: ANTH 1102 and permission of major. Supervised research projects in a field setting. Individual projects related to a central problem or issue, using research methods and techniques in cultural anthropology; interviews, surveys, participant-observation, and questionnaires are included.

Non-Traditional Format: Since research projects are supervised in a field setting, the amount of contact hours varies. Contact hours exceed the minimum.

Not offered on a regular basis.

(ANTH) RELI 4640/6640. Anthropology of Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Anthropological approaches to the world's major religions as they relate to complex societies.

Not offered on a regular basis.

(ANTH) GEOL 4700/6700. Archaeological Geology. 3 hours.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L.

Archaeological geology examines the use of earth science methods and theories in the study of archaeological sites and their contents. The four major areas covered include: (1) the archaeological site and geology; (2) age determination techniques; (3) exploration techniques; (4) artifact characterization.

Offered spring semester.

ANTH 4710/6710-4710L/6710L. Human Origins. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 and permission of major.

The evolutionary history of the human species through examination of the fossil record. The fossil record is introduced using precision casts of fossil specimens. Scientific methods are developed by rediscovering major findings. The influence of changing interpretations on the culture of science is demonstrated.

Not offered on a regular basis.

ANTH 4740. Primate Ecology. 3 hours.

Not open to students with credit in PSYC 5770/7770.

Prerequisite: ANTH 1102 or permission of department. Nonhuman primates in their natural habitats, including biogeography, feeding and ranging behavior, structure and social organization of groups in relation to environment, and primates as members of communities. Specific consideration of conservation issues, especially confrontation with human populations related to land use and development

Not offered on a regular basis.

ANTH 4790/6790. Human Adaptation. 3 hours.

Prerequisite: Undergraduate level only: ANTH 1102 and permission of major; Graduate level only: Permission of major.

Human diversity as response to environmental stress, from both a biological and cultural perspective. Topics include adaptation to heat, cold, altitude, malnutrition, and infectious disease; the impact of westernization and technological advancement on human biological function; and growth and development of the individual under environmental stress.

Not offered on a regular basis.

(ANTH) LING 4860/6860. Sociolinguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The study of language as a cultural and social phenomenon. Topics include language and meaning, language and world view, language and social behavior, and language and social issues.

Offered every even-numbered year on a regular basis.

ANTH 4900/6900. Special Topics in Anthropology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ANTH 1102 or permission of major.

Current topics in anthropology. Course may be taken through UGA Studies Abroad program in Guatemala. Not offered on a regular basis.

ANTH 4910. Senior Seminar in Anthropology. 3 hours.

Prerequisite: Permission of department.

Reading and discussion of contemporary issues in Anthropology. Students write and present a formal paper relating current method and theory to their research interests.

Not offered on a regular basis.

ANTH 4950. Individual Special Topics in Anthropology. 3 hours. Repeatable for maximum 9 hours credit. Prerequisite: ANTH 1102 and permission of department.

Semi-independent study including reading and discussions of current developments in anthropology carried out as a contract between an individual student and an appropriate instructor.

Non-Traditional Format: Professor and student will meet as needed.

Not offered on a regular basis.

ANTH 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects with faculty direction.

Non-Traditional Format: Professor and student will meet as needed.

Not offered on a regular basis.

ANTH 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects with faculty direction.

Non-Traditional Format: Professor and student will meet as needed.

Not offered on a regular basis.

ANTH 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects with faculty direction.

Non-Traditional Format: Professor and student will meet as needed.

Not offered on a regular basis.

ANTH 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Professor and student meet as needed.

Not offered on a regular basis.

(ARAB) Arabic

College of Arts and Sciences, Department of Religion

ARAB 1001. Elementary Modern Standard Arabic I. 4 hours.

Fundamentals of grammar, pronunciation, reading, composition, and conversation of standard (including classical) Arabic.

Offered fall semester.

ARAB 1002. Elementary Modern Standard Arabic II. 4 hours.

Prerequisite: ARAB 1001.

A continuation of Elementary Modern Standard Arabic I, including review and introduction of new content.

Offered spring semester.

ARAB 2003. Intermediate Standard Arabic I. 3 hours.

Prerequisite: ARAB 1002.

Intermediate grammar, reading, conversation, and composition in standard (including classical) Arabic. Particular attention will be given to readings in Islamic literature.

Offered fall semester.

ARAB 2004. Intermediate Standard Arabic II. 3 hours.

Prerequisite: ARAB 2003.

A continuation of Intermediate Standard Arabic I, including review and introduction of new content.

Offered spring semester.

ARAB 4100/6100. Reading and Research in Arabic and Islamic Literature. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: ARAB 2004 or permission of department. Arabic and Islamic texts with emphasis upon extensive reading and individual and/or group research projects. Qualified students may study Persian and/or Turkish texts.

Not offered on a regular basis.

ARAB 4960H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

ARAB 4970H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

ARAB 4980H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

ARAB 4990H. Honors Thesis. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

(ARED) Art Education

College of Arts and Sciences, School of Art

ARED 3050. Art and the Child. 3 hours. Three 2-hour lab periods.

Child creative development including experiences in drawing, painting, graphics, sculpture, and crafts appropriate to children. (May not be used for credit by art education majors.)

Offered fall and spring semesters.

ARED 3350. Basic Curriculum in Art Education. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Planning and developing procedures for implementing curriculum at the elementary level. An investigation into the literature, materials, and procedures appropriate to children of different ages, including studio experiences.

Offered fall and spring semesters.

ARED 3360. Teaching Procedures in Art Education. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Planning and implementing art instruction for middle and secondary students. Specific teaching procedures, materials, and techniques developed from Art Education philosophy, research, and studio practices.

Offered fall and spring semesters.

ARED 3450. School Practicum in Art Education. 1-2 hours. Repeatable for maximum 2 hours credit.

School practicum in Art Education.

Non-Traditional Format: By arrangement of student.

Offered fall and spring semesters.

ARED 4010/6010. Techniques of Art Appreciation and Criticism. 3 hours.

Analyzing, interpreting, and evaluating art; the construction of art appreciation curricula; critical methodology as employed in classroom teaching strategies.

Offered fall and spring semesters.

ARED 4340/6340. Art for the Exceptional Child. 3 hours.

Nature, identification, and treatment of children's disabilities through art. Emphasizes the role of art for emotional, social, educational, and vocational adjustment of gifted or disabled students.

Offered fall and spring semesters.

ARED 5130/7130. Studio Techniques for Art Education. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Use of tools, materials, and processes in adapting the studio arts to children at various age levels and in integrating studio with a total program.

Offered fall and spring semesters.

ARED 5230/7230. Special Problems in Art Education I. 3 hours.

Prerequisite: Permission of department.

Specific problem areas, according to individual needs, are investigated, discussed, and evaluated.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ARED 5240/7240. Special Problems in Art Education II. 3 hours.

Prerequisite: Permission of department.

Specific problem areas with adult populations, e.g., prisoners and the aged, are investigated, discussed, and evaluated.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ARED 5250/7250. Special Problems in Art Education III. 3 hours.

Prerequisite: Permission of department.

Specific problem areas in mental health facilities are investigated, discussed, and evaluated.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ARED 5260/7260. Special Problems in Art Education IV. 3 hours.

Prerequisite: Permission of department.

Specific problem areas with handicapped children are investigated, discussed, and evaluated.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ARED 5270/7270. Special Problems in Art Education V. 3 hours.

Prerequisite: Permission of department.

Specific problem areas in community recreation and cultural centers and museums are investigated, discussed, and evaluated.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ARED 5310/7310. Multicultural and Cross-Cultural Study in Art Education. 3 hours.

Prerequisite: Permission of department.

Various cultural traditions in the United States with emphasis on multicultural and cross-cultural art education curricula.

Offered fall and spring semesters.

ARED 5350/7350. Teaching of Art in the Elementary School. 3 hours.

Prerequisite: Permission of department.

Recommended practices in qualitative curriculum planning; laboratory experiments that identify philosophical, motivational, and evaluative problems in elementary school art.

Offered fall and spring semesters.

Art Education / Art Graphic Design

ARED 5360/7360. Teaching of Art in the Secondary School. 3 hours.

Prerequisite: Permission of department.

Recommended practice in qualitative curriculum planning, together with laboratory projects that identify philosophical, motivational, and evaluative problems in secondary school art.

Offered fall and spring semesters.

ARED 5460/7460. Student Teaching in Art Education. 12 hours.

Prerequisite: Permission of department.

Corequisite: ARED 5470/7470.

Supervised internship in teaching art.

Non-Traditional Format: Visits by college supervisor and seminars by arrangement.

Offered fall and spring semesters.

ARED 5470/7470. Issues and Practices in Teaching Art. 3 hours.

Corequisite: ARED 5460/7460.

Varied approaches to art issues; practices relevant to art education. Must be taken during student teaching.

Offered fall and spring semesters.

ARED 5500/7500. Art Education and the Art Museum. 3 hours.

Prerequisite: Permission of department.

History and current practices in museum education. Application of curricula design programs in art education.

Offered fall and spring semesters.

(ARGD) Art Graphic Design

College of Arts and Sciences, School of Art

ARGD 3010. Design Drawing Techniques. 3 hours. Three 2-hour lab periods.

Basic technical and perspective drawing, leading into felt marker illustration.

Offered fall and spring semesters.

ARGD 3020. Electronic Design. 3 hours. Three lectures and three 1-hour lab periods.

The Macintosh system and utilities with emphasis on page layout and illustration programs.

Offered fall and spring semesters.

ARGD 3030. Typography. 3 hours. Three 2-hour lab periods.

Principles of lettering, letter construction, and basic typography in relation to visual communication. Experience in lettering as it is used and reproduced today is a major component of this course.

Offered fall and spring semesters.

ARGD 3040. Concepts in Design. 3 hours. Three 2-hour lab periods.

Development of techniques to improve formulation of

ideas and creative skills in design.

Offered fall and spring semesters.

ARGD 3050. Illustration. 3 hours. Three 2-hour lab periods.

Stresses the importance of technique in a variety of media as the basis for solving design problems.

Offered fall and spring semesters.

ARGD 3060. Layout. 3 hours. Three 2-hour lab periods.

Beginning design of page layout for printed materials using symmetry and asymmetry to create compositions with type and image.

Offered fall and spring semesters.

ARGD 3070. The History of Graphic Design. 3 hours.

A comprehensive history of graphic design from antiquity until the present.

Offered fall and spring semesters.

ARGD 3080. Internship in Graphic Design. 3 hours.

Entry-level experience working in commercial design office or advertising agencies.

Non-Traditional Format: Internship.

Offered fall and spring semesters.

ARGD 3310. Fundamentals of Scientific Illustration. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Scientific illustration and experience with the commonly used media, including pencil, ink, scratchboard, and carbon dust. Portfolio development and common business practices are important components of this course.

Offered fall and spring semesters.

ARGD 3320. Intermediate Scientific Illustration. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

A continuation of Fundamentals of Scientific Illustration but introducing plate layout and design, working from a publisher's specifications, the production of illustrations for portfolio, and contract negotiations.

Offered fall and spring semesters.

ARGD 3330. Airbrush for Scientific Illustration. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

The equipment, materials, and methods for rendering with the airbrush and practice to develop facility in making realistic renderings.

Offered every year on a regular basis.

ARGD 3340. Art Graphic Design Directed Study in Scientific Illustration. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Materials and methods used for scientific illustration in color and for the production of illustrations of professional caliber on specific subjects (entomology, archeology, etc.) for inclusion in a portfolio.

Offered fall and spring semesters.

ARGD 4010. Graphic Design Reproduction. 3 hours. Three 2-hour lab periods.

A series of projects to acquaint students with the advantages and limitations of current printing technologies.

Offered fall and spring semesters.

ARGD 4020. Environmental Graphic Design. 3 hours. Three 2-hour lab periods.

The design of graphic elements in the built and natural environment including informational signs and symbols, client identity, exhibit design and ornamentation systems.

Offered fall and spring semesters.

ARGD 4030. Advanced Typography. 3 hours. Three 2-hour lab periods.

Functional communication utilizing creative manipulation of lettering, typography, images, and technical processes.

Offered fall and spring semesters.

ARGD 4040. Advanced Illustration. 3 hours. Three 2-hour lab periods.

Stresses the development of an individual visual style through in-depth exploration of a selected technique.

Offered fall and spring semesters.

ARGD 4050. Calligraphy. 3 hours. Three 2-hour lab periods.

Use of the fifteenth-century Humanist Hand and its italic variant, the Chancery Hand, and the familiarity with other historical calligraphic hands.

Offered fall and spring semesters.

ARGD 4060. Advanced Layout. 3 hours. Three 2-hour lab periods.

Comprehensive design projects in book design, posters, and other printed material.

Offered fall and spring semesters.

ARGD 4070. Three-Dimensional Graphic Design. 3 hours. Three 2-hour lab periods.

Comprehensive structural and graphic development of three-dimensional, promotional objects such as pop-ups, packaging, and displays.

Offered fall and spring semesters.

ARGD 4080. Special Problems in Graphic Design. 1-3 hours. Repeatable for maximum 9 hours credit. 1-3 lab periods of 2 hours per week.

Prerequisite: Permission of department.

Advanced research in graphic design media and techniques with application to a comprehensive project in visual communication.

Offered fall and spring semesters.

ARGD 4090. Advanced Electronic Design. 3 hours. Three 2-hour lab periods.

Use of desk-top computer for image editing and related applications.

Offered fall and spring semesters.

ARGD 4100. Graphic Design Business and Promotion. 3 hours. Three 2-hour lab periods.

Business practices in graphic design, including portfolio formats, personal promotion, resumes, contracts, and professional ethics.

Offered fall and spring semesters.

ARGD 4110. Portfolio Project. 3 hours. Three 2-hour lab periods.

A capstone course developing a comprehensive project of choice.

Offered fall and spring semesters.

(ARHI) Art History

College of Arts and Sciences, School of Art

ARHI 2100. Monuments of World Art. 3 hours.

A chronological survey of major monuments of world art.

Offered fall, spring, and summer semesters.

ARHI 2110H. Monuments of World Art (Honors). 3 hours.

Prerequisite: Permission of Honors.

A chronological survey of major monuments of world art.

Not offered on a regular basis.

ARHI 3000. Ancient Art. 3 hours.

Major monuments of art from the ancient world from the Paleolithic era through the Roman Empire. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 3010. Medieval Art. 3 hours.

European art from the fourth century through the fourteenth century with an emphasis on the impact of Christianity on Europe's classical Roman and non-classical heritage. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 3020. Renaissance Art. 3 hours.

Major monuments, artists, and subjects of art from the late fourteenth through the sixteenth century in Europe. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 3030. Baroque Art. 3 hours.

Formal and contextual history of the arts of the Baroque period, roughly from 1590 through 1750 throughout Europe focusing on major developments in Italy, Spain, France, Flanders, and Holland. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

Art History

ARHI 3040. Asian Art. 3 hours.

The arts of India, central and southeast Asia, China, and Japan with emphasis on religions and cultural interchanges in Asian history. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 3050. Nineteenth-Century Art. 3 hours.

Art of the early modern period from neo-classicism through the Fin de Siecle. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 3060. Twentieth-Century Art. 3 hours.

Art of the modern period from post-impressionism to post-modernism. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 3070. American Architecture. 3 hours.

Prerequisite: Permission of department.
American buildings, their architects, and architectural theory in the continental United States from the seventeenth through the twentieth centuries.
Offered on a regular basis.

ARHI 4000/6000. Early Greek Art. 3 hours.

Prerequisite: Permission of department.
Vase painting, sculpture, and architecture from the Geometric through the Archaic periods. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4010/6010. Classical and Hellenistic Greek Art. 3 hours.

Prerequisite: Permission of department.
Sculpture, architecture, and some vase painting from the Classical and Hellenistic periods emphasizing major monuments, including the Temple of Zeus at Olympia, the Parthenon, and the Great Altar of Zeus and Athena at Pergamon. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4020/6020. Roman Art and Architecture. 3 hours.

Prerequisite: Permission of department.
Buildings and wall painting of Pompeii, Roman Republican portraiture, Imperial portraiture, and major buildings and their associated architectural sculpture located in Rome and other sites within the Empire. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4030/6030. Classical Tradition in the Visual Arts. 3 hours.

Prerequisite: Permission of department.
The influence of classical antiquity on the art and architecture of post-classical eras tracing formal affinities and the myths of classical gods and heroes. Course

may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 4100/6100. Early Medieval Art. 3 hours.

Prerequisite: Permission of department.
Architecture, sculpture, and painting in Western Europe from the seventh through the eleventh centuries. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4110/6110. Romanesque Art. 3 hours.

Prerequisite: Permission of department.
Architecture, sculpture, and painting in Western Europe of the eleventh and twelfth centuries with particular emphasis on France. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4120/6120. Gothic Art. 3 hours.

Prerequisite: Permission of department.
Architecture, sculpture, and painting of the twelfth and thirteenth centuries in Europe with special emphasis on France. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4130/6130. Late Gothic Art in Italy. 3 hours.

Prerequisite: Permission of department.
Principal monuments and artists of the thirteenth and fourteenth centuries in Italy emphasizing figures such as Giotto, Duccio, Simone Martini, and Ambrogio Lorenzetti. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4200/6200. Early Renaissance in Italy. 3 hours.

Prerequisite: Permission of department.
Architecture, sculpture, and painting of the fifteenth century focusing on Tuscany, and the emergence and development of the new art principles in Florence represented in the work of such artists as Masaccio, Brunelleschi, Donatello, Alberti, Fra Angelico, Filippo Lippi, Ghirlandaio, Pollaiuolo, and Botticelli. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4210/6210. High Renaissance and Mannerism in Italy. 3 hours.

Prerequisite: Permission of department.
The climactic period of the Renaissance in Italy with special emphasis on such key figures as Leonardo, Michelangelo, Raphael, Protorno, Rosso Fiorentino, and Bronzino. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARHI 4220/6220. Northern Renaissance. 3 hours.

Prerequisite: Permission of department.

Painting north of the Alps, primarily in Flanders and Germany from the fourteenth to the sixteenth century, with special attention to the van Eycks, van der Weyden, Bosch, Durer, and Grunewald. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4290/6290. Renaissance and Baroque Sculpture. 3 hours.

Prerequisite: Permission of department.

The development of period styles and an analysis of the role of function and tradition in European sculpture for ca. 1260-1700, with special attention to the work of Donatello, Michelangelo, and Bernini. Course may be taken through UGA Studies Abroad program in Cortona. Offered on a regular basis.

ARHI 4300/6300. Italian Baroque Art and Architecture. 3 hours.

Prerequisite: Permission of department.

Baroque art and architecture in Italy, with special emphasis on Rome, and such important figures as the Carracci, Caravaggio, Bernini, and Borromini. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 4310/6310. Northern Baroque Art. 3 hours.

Prerequisite: Permission of department.

French and Dutch art of the seventeenth century with emphasis on such key figures as Rubens, Velasquez, Rembrandt, and Poussin. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 4350/6350. Art and Architecture of the City of Rome. 3 hours.

Prerequisite: Permission of department.

The continuity of an artistic tradition in relation to the history of the seat of the Roman Empire, the Catholic Church, and modern Italy. Attention is given to specific sites, artistic types, and public processions. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 4400/6400. Romanticism and Neoclassicism. 3 hours.

Prerequisite: Permission of department.

European art and architecture from ca. 1760 through 1865 including the sublime, the beautiful, the picturesque, historical revivalism, exoticism, rationalism, and eclecticism.

Offered on a regular basis.

ARHI 4410/6410. American Art from Colonial Settlement through the Civil War. 3 hours.

Prerequisite: Permission of department.

The formation of a national identity and assimilation of European styles in painting, sculpture, and cultural artifacts such as photographs and popular illustrations.

Artists include Copley, Peale, Allston, Cole, Church, Quidor, Mount, Bingham, Heade, Bierstadt, and Homer. Offered on a regular basis.

ARHI 4420/6420. American Art of the Fin de Siecle 1876-1913. 3 hours.

Prerequisite: Permission of department.

The transition in American art from Victorianism to early Modernism in an age of science, progress and decay, tradition and ethnicity, motherhood and the "new woman." A key cultural referent will be the World's Columbian Exposition of 1893.

Offered on a regular basis.

ARHI 4440/6440. American Modernism 1900-1946. 3 hours.

Prerequisite: Permission of department.

The creation of radical forms of artistic expression, and their seeming rejection by the Regionalists in relation to two world wars, the modern city, the depression, and revolutions in space, time, and technology. Special emphasis will be placed on the diverse group of artists mentored by Alfred Stieglitz.

Offered on a regular basis.

ARHI 4500/6500. Realism and Impressionism. 3 hours.

Prerequisite: Permission of department.

The rise and development of naturalism in mid-nineteenth-century art in Europe.

Offered on a regular basis.

ARHI 4510/6510. Modern Art in Europe from 1886 to 1918. 3 hours.

Prerequisite: Permission of department.

Painting and sculpture from Post-Impressionism to the end of World War I, the Cubo-Futurist revolution and approaches to expressionism and abstraction. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARHI 4520/6520. Spirituality in Modern Art. 3 hours.

Prerequisite: ARHI 3050 or ARHI 3060 or ARHI 3070 or permission of department.

Myth and spirituality in the abstract art of the late nineteenth and twentieth centuries, as exemplified in Gauguin, Kandinsky, Klee, Brancusi, Pollock, and Rothko, among others.

Offered on a regular basis.

ARHI 4540/6540. European Art Between the Great Wars. 3 hours.

Prerequisite: Permission of department.

High modernism in the twentieth century. Topics include Dada, Constructivism, Surrealism, the Bauhaus, and other major trends between the two World Wars.

Offered on a regular basis.

ARHI 4550/6550. Art Since 1945. 3 hours.

Prerequisite: Permission of department.

Major artists and movements in art after 1945.

Offered on a regular basis.

Art History

ARHI 4600/6600. Art of India. 3 hours.

Prerequisite: ARHI 3040 or permission of department. Traditional art of India from the Indus valley civilization to the Muslim conquest. Major monuments of architecture, sculpture, and painting are investigated in the context of political and religious developments in the Indian subcontinent, including influences of the Indic religions of Buddhism, Hinduism, and Jainism.

Offered on a regular basis.

ARHI 4610/6610. Arts of China. 3 hours.

Prerequisite: ARHI 3040 or permission of department. Major trends in the arts of China from the Neolithic age to the eve of the modern period, ca. 2500 BCE to the nineteenth century CE. Factors affecting important developments in style and subject matter will be studied in the context of contemporary cultural phenomena.

Offered on a regular basis.

ARHI 4620/6620. Japanese Art. 3 hours.

Prerequisite: ARHI 3040 or permission of department. History of Japanese art of the proto-historic period to the exposure of Japan to the West in the mid-nineteenth century. The Buddhist arts of Japan during the imperial period, the evolution of Japanese pictorial art, religious and secular architecture, and Shinto-influenced arts.

Offered on a regular basis.

ARHI 4700/6700. Guided Foreign Study. 3 hours.

Prerequisite: Permission of department.

Travel to selected works in foreign collections, and sites. Local library, archival resources used. Preparatory and on-site lecture and discussion. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4710/6710. Guided Foreign Study. 3 hours.

Prerequisite: ARHI 4500/6500.

Various topics related to Italian art. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4900/6900. Topics in Ancient and Medieval Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in Ancient and Medieval art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4910/6910. Topics in Renaissance and Baroque Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in Renaissance and Baroque art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4920/6920. Topics in Modern Art. 3 hours.

Prerequisite: Permission of department.

Particular topics in modern art and architecture from

Europe or America treated in depth. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4930/6930. Topics in Asian or Non-Western Art. 3 hours.

Prerequisite: ARHI 4600/6600 or ARHI 4610/6610 or ARHI 4620/6620 or permission of department.

Particular topics in Asian and non-western art and architecture treated in depth. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4940/6940. Gender Issues and Art History. 3 hours.

Prerequisite: Permission of department.

The impact of feminist theory and gay and lesbian studies on recent art historical scholarship. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4950/6950. Independent Study. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Special projects in fields in which the student has demonstrated the ability to conduct research and write a fully and correctly annotated paper. Course may be taken through UGA Studies Abroad program in Cortona.

Not offered on a regular basis.

ARHI 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

ARHI 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

ARHI 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

ARHI 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field or in a closely

related field.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

(ARID) Art Interior Design

College of Arts and Sciences, School of Art

ARID 1010. Introduction to Interior Design. 2 hours.

One lecture and one 1-hour lab period.

Prerequisite: ARST 1050.

Principles of design in relation to the human environment in interior design and related fields. The profession of interior design is introduced in its organization and practice.

Offered fall semester.

ARID 2000. Drawing for Interior Design. 3 hours.

Three 2-hour lab periods.

Prerequisite: ARST 1060 and ARST 1070.

Standard conventions in drawing, including projection of plans, elevations, sections, oblique, axonometric, and one- and two-point perspective drawings. Attention is given to the development of technical skills with appropriate media as well as interior design and presentation.

Offered fall and spring semesters.

ARID 2010. Rendering for Interior Design. 3 hours.

Three 2-hour lab periods.

Prerequisite: ARID 2000.

Color, free-hand sketching techniques, layout, and composition in two-dimensional projects relating to the process of interior design.

Offered fall and spring semesters.

ARID 2110. Studio I: Single Family Residential Design. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 2000.

Symbolic language of interior design, measuring and scaling interior spaces and furnishings, and the application of principles of design for a single-family residence.

Offered fall and spring semesters.

ARID 3110. Studio II: Documenting Interior Design Projects. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 2010 and ARID 2110 and permission of major.

All design phases in the development of a comprehensive interior design project from programming through contract documents. Development of skills in creating working drawings and oral presentations.

Offered fall, spring, and summer semesters.

ARID 3120. Studio III: Space Programming and Office Design. 4 hours. Four 2-hour lab periods.

Prerequisite: ARID 3110 and permission of major.

Office design with emphasis on defining the needs and values of the user, the client, and society, and their

interrelationships. Initiation of project goals and viable design concepts.

Offered fall and spring semesters.

ARID 3130. Studio IV: Design for Special Populations. 4 hours. Four 2-hour lab periods.

Prerequisite: ARID 3120 and permission of major.

Development and presentation of a studio design project for people with varying special needs. Projection of documents of advanced complexity, application of specialized knowledge from prerequisite courses, and familiarity with relevant codes, standards, and guidelines.

Offered fall and spring semesters.

ARID 3210. History of the Decorative Arts I. 3 hours.

Prerequisite: ARHI 2100 and permission of major.

A historical survey of architecture; concepts of interior space, furniture, and allied crafts as a background for contemporary design.

Offered fall and spring semesters.

ARID 3220. History of the Decorative Arts II. 3 hours.

Prerequisite: ARID 3210 and permission of major.

Decorative arts of Europe and America beginning with the Arts and Crafts Movement of the nineteenth century and continuing through the twentieth century.

Offered fall and spring semesters.

ARID 3310. Building Systems. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 2010 and ARID 2110 and permission of major.

Standard building systems, such as acoustical, electrical, plumbing, heating, and air-conditioning, as they relate to the built environment and affect decisions in interior design.

Offered fall and spring semesters.

ARID 3320. Interior Finishes and Materials. 2 hours.

Two lectures and one 2-hour lab period.

Prerequisite: ARID 3110 and ARID 3310 and ARID 3410.

Materials and finishes in interior design; factors affecting their selection and specification, and their incorporation into contract documents.

Offered fall and spring semesters.

ARID 3330. Lighting for Interior Design. 3 hours.

Three 2-hour lab periods.

Prerequisite: ARID 3120 and ARID 3320 and ARID 3410 and permission of major.

Technical and behavioral factors affecting lighting design. Special emphasis on calculations, selection, and specification.

Offered fall and spring semesters.

ARID 3340. Furniture Design. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 3120 and ARID 3320 and ARID 3420 and permission of major.

Cabinetry and furniture design, including construction methods, drawings, and design presentation.

Offered fall and spring semesters.

Art Interior Design / Studio Art

ARID 3410. Computer-Aided Design for Interiors. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 2010 and ARID 2110 and permission of major.

The creation of two- and three-dimensional drawings using computer aided design.

Offered fall, spring, and summer semesters.

ARID 3420. Computer-Based Business/Professional Application. 3 hours. Three 2-hour lab periods.

Prerequisite: ARID 3410.

Computer-based design project management utilizing appropriate software for CAD, desktop publishing, spreadsheets, databases, and presentations.

Offered fall and spring semesters.

ARID 4010. Interior Design Internship. 3 hours.

Prerequisite: ARID 3130 and ARID 3330 and ARID 3340 and permission of major.

Minimum of four hundred hours working in an approved interior design-related firm. Requirements include portfolio preparation, job interviews, and selection of position one term before registration. Responsibility for finding position rests with student.

Non-Traditional Format: On-the-job learning at internship in field.

Offered fall, spring, and summer semesters.

ARID 4110. Studio V: Large-Scale, Non-Residential Design. 4 hours. Four 2-hour lab periods.

Prerequisite: ARID 4010 and permission of major.

Completion of project from programming to final presentation of non-residential, multi-purpose design of advanced complexity.

Offered fall and spring semesters.

ARID 4150. Special Topics in Interior Design. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ARID 3110 and ARID 3310 and ARID 3410 and permission of major.

Special topics for advanced students with a formal written and/or graphic presentation of the results.

Non-Traditional Format: Only to be taken by students who have indicated that they can handle directed studies responsibility.

Offered fall and spring semesters.

ARID 4350. Interior Design Practicum. 1-3 hours.

Prerequisite: ARID 3110 and ARID 3310 and ARID 3410 and permission of major.

Individualized projects arranged with clients to explore various aspects of the interior design profession.

Non-Traditional Format: Only to be taken by students who have indicated that they can handle directed studies responsibility.

Offered fall and spring semesters.

ARID 4610. Senior Treatise I. 2 hours. One 2-hour lab period.

Prerequisite: ARID 4110 and permission of major.

Systematic design methodology in the preparation of a written prospectus of advanced complexity and scope in an area of specialization within the broader field of interior design.

Offered fall semester.

ARID 4620. Senior Treatise II. 5 hours. One 5-hour lab period.

Prerequisite: ARID 4610 and permission of major.

Development and completion of the design project defined by the prospectus from Senior Treatise I. The course culminates in the oral and graphic presentation of the research findings and respondent design proposals.

Offered spring semester.

(ARST) Studio Art

College of Arts and Sciences, School of Art

ARST 1050. Drawing I. 3 hours. Three 2-hour lab periods.

The techniques, materials, and principles of drawing.

Offered fall, spring, and summer semesters.

ARST 1060. Color/Composition. 3 hours. Three 2-hour lab periods.

Color emphasizing and its role in composition and two-dimensional design.

Offered fall, spring, and summer semesters.

ARST 1070. Drawing II. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1050.

A continuation of Drawing I with an emphasis on figure drawing.

Offered fall, spring, and summer semesters.

ARST 1080. Three-Dimensional Design. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1050 and ARST 1060.

Three-dimensional forms and space using various materials and methods.

Offered fall, spring, and summer semesters.

ARST 2010. Intermediate Drawing. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Varied approaches to drawing incorporating experience with still life, landscape, models, composition, analytical, and expressive drawing, and the use of basic drawing media. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 2100. Introductory Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070.

Fundamentals of painting related to subject matter, composition, and color. Preparation of supports and grounds, and knowledge of basic painting materials will

be stressed. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall, spring, and summer semesters.

ARST 2110. Intermediate Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2100.

Painting applied to still life, landscape, abstraction, and the human figure from live models. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 2200. Introductory Photography. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 1050.

The art of photography, its history and criticism, including basic processing techniques and optical principles using standard cameras and black and white materials. Picture making concepts and interpretation are emphasized.

Offered fall, spring, and summer semesters.

ARST 2300. Printmaking: Relief Processes I. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Various relief printmaking techniques with concentrated work in the processes of woodcut, wood engraving, and linoleum cut. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 2310. Printmaking: Intaglio I. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Various printmaking techniques with concentrated work on intaglio. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 2400. Fundamentals of Sculpture. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Technical fundamentals of carving, modelling, and constructive methods of sculpture and their aesthetic implications in terms of form and content. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 2410. Portrait and Figure Sculpture. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2400.

Sculpting the human form directly from the model. Course may be taken through UGA Studies Abroad program in Cortona.

Offered on a regular basis.

ARST 2500. Introduction to Ceramics. 3 hours. Three 2-hour lab periods.

Development of personal expression using the ceramic process. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 2600. Jewelry and Metalwork. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of major.

Fundamental techniques of forming, casting, fabrication, and finishing metals such as sterling, gold, copper, and iron. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 2700. Fundamentals of Fabric Structure. 3 hours. Three 2-hour lab periods.

Woven and non-woven fabric structure and the relation between process and material. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 2710. Fundamentals of Fabric Decoration. 3 hours. Three 2-hour lab periods.

Fabric decoration utilizing dyes and pigments. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3000. Introduction to Figure Drawing. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2010.

Compositional, expressive, and anatomical approaches to drawing the human figure, traditional media such as charcoal, conte crayon, graphite, and ink will be used.

Offered fall, spring, and summer semesters.

ARST 3010. Advanced Drawing. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3000.

Advanced drawing stressing individual projects and experimental approaches.

Offered fall and spring semesters.

ARST 3110. Transparent Watercolor. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2100 or permission of department.

Transparent watercolor including landscape, still life, and the human figure. Personal imagery and non-representational painting will also be explored. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3120. Aqueous Media. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2110.

Synthetic media (acrylics), casein, and water media other than transparent watercolor. Course may be taken through UGA Studies Abroad program in Cortona.

Offered every year on a regular basis.

ARST 3130. Figure Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2110 and ARST 3000.

Compositional, expressive, and anatomical aspects of painting the human figure; work from the model, both

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nude and clothed, and other sources. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 3140. Painting Studio. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods. Prerequisite: ARST 2110.

Inquiry into varied approaches in painting, both representational and non-representational. Experimental attitudes and personal ideas and solutions are encouraged. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 3150. Figure Painting. 3 hours. Three 2-hour lab periods. Prerequisite: ARST 3140.

Painting the human figure emphasizing structure and painting techniques. Media include oil and acrylic paints and grounds. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 3160. Painting Materials and Techniques. 3 hours. Three 2-hour lab periods. Prerequisite: ARST 3110.

Historical techniques such as egg tempera, fresco, encaustic, and Venetian mode oil painting as they apply to contemporary needs; modern materials such as alkyd and polymer resins are introduced. Consideration is given to the properties of pigments, binders, grounds, and supports. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 3200. Intermediate Photography. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: ARST 2200.

Camera skills and processing techniques for black and white negatives and prints with emphasis on visual concepts and articulation of ideas. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 3210. Color Photography. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: ARST 3200.

Color photography including color theory, color temperature, lighting, and color printing. Concepts are presented in the context of contemporary trends and practices. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall, spring, and summer semesters.

ARST 3220. Medium and Large Format. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: ARST 3200.

Medium and large format cameras using roll, pack, and sheet films. Techniques of advanced camera handling, lighting, film processing, and refined printing. Historical and contemporary practices considered. Course

may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 3230. Internship in Photography. 2-3 hours. Repeatable for maximum 9 hours credit. Prerequisite: ARST 2200.

Practical experience with professionals including photographers, designers, and computer specialists. Independent projects and research with editors, curators, teachers, and historians. Assist photography faculty in creative work with emphasis on studio and lab production. Course may be taken through UGA Studies Abroad program in Cortona.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

ARST 3300. Printmaking: Lithography I. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Various printmaking techniques with concentrated work on lithography. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 3310. Book Art/Papermaking I. 3 hours. Three 2-hour lab periods.

Hand papermaking as a support for other media and as a creative medium in two or three dimensions. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3320. Book Art/Letterpress I. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2300 and ARST 2400.

Letterpress printing and book arts as they relate to the creative synthesis of text and image in book and broad-side form.

Offered fall and spring semesters.

ARST 3330. Printmaking: Special Topics I. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2310 and ARST 3300 and ARST 3310 and ARST 3320.

Special projects for advanced students. Course may be taken through UGA Studies Abroad program in Cortona. Offered fall and spring semesters.

ARST 3340. Printmaking: Relief Processes II. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2300.

Relief for advanced students stressing their aesthetic development. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3350. Printmaking: Intaglio II. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2310.

Intaglio for advanced students stressing their aesthetic

development. Course may be taken through UGA Studies Abroad program in Cortona.
Offered spring semester.

ARST 3360. Printmaking: Lithography II. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3300.
Lithography for advanced students stressing aesthetic development. Course may be taken through UGA Studies Abroad program in Cortona.
Offered on a regular basis.

ARST 3370. Book Art/Papermaking II. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3310.
The book as an art form, its structure including various binding techniques in relation to its content. Course may be taken through UGA Studies Abroad program in Cortona.
Offered spring semester.

ARST 3380. Printmaking: Book Art/Letterpress II. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3320.
Special letterpress project for advanced students stressing their aesthetic development with further technical instruction.
Offered spring semester.

ARST 3390. Special Topics II: Printmaking. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3330.
Special topics for advanced students stressing aesthetic development with further technical instruction. Course may be taken through UGA Studies Abroad program in Cortona.
Offered spring semester.

ARST 3400. Sculpture: Construction in Metal. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 2400.
Beginning welding techniques and the use of metal in sculptural composition. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3410. Intermediate Construction in Metal. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3400.
Advanced welding techniques and the use of mixed media. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3420. Sculpture: The Subtractive Process. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 2400 or ARST 2410.
Direct carving in wood or stone. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3430. Carving Wood and Stone. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 2400 or ARST 2410.
Carving wood and stone, both representational and non-representational, with emphasis on aesthetic development. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3440. Fundamentals of Casting Metal Sculpture. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 2400 or ARST 2410.
Fundamental techniques for producing metal sculpture using refractory molds and sand casting. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3450. Intermediate Casting in Metal. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 3440.
Production of sculpture in refractory molds and sand casting, both representational and non-representational, with emphasis on aesthetic development. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3460. Intermediate Portrait and Figure Sculpture. 3 hours. Three 2-hour lab periods.
Prerequisite: ARST 2410.
Sculpting the human form based on the live model. Anatomy, composition, and sculptural techniques are emphasized as means for creative expression. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3500. Intermediate Ceramics. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.
Prerequisite: ARST 2500.
Sculptural and functional ceramic forms with an emphasis on personal expression and individual style. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3610. Jewelry. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.
Prerequisite: ARST 2600.
Traditional and contemporary forms, materials, ornament, adornment, and techniques of surface enrichment. Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3620. Metalwork. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.
Prerequisite: ARST 2600.
Forging, raising, and surface enrichment as applied to hollow ware, flatware, and architectural ornaments.

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Course may be taken through UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3700. On-Loom Weaving. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2700.

Utilization of the floor loom to study basic weaves and their application to hand-crafted and industrial textiles. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3710. Advanced Weaving. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2700.

Woven structures on multi-harness looms. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3720. Basics of Non-Woven Fabrics. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2700.

Construction techniques of non-woven fabrics and their creative applications. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3730. Silkscreen Processes. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2710.

Utilization of the silkscreen for fabric printing, including simple stencils and photographic processes. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3740. Advanced Decoration. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2710.

Development of a professional portfolio for careers in the textile industry. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3750. History of Fabric Design. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

The development of the fabric arts from prehistoric periods to the present in conjunction with studio projects. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3760. Japanese Fabrics. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2700 and ARST 2710.

Japanese fabrics in a historical and cultural context and their application to contemporary fiber art in conjunction with studio projects. Course may be taken through

UGA Studies Abroad program in Cortona.
Offered fall and spring semesters.

ARST 3770. Peruvian Fabrics. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2700 and ARST 2710.

Peruvian fabrics in historical and cultural context and their application to contemporary fiber art in conjunction with studio projects. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 3800. The Computer in Art. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

The computer as an aid in designing personal creative work for a variety of careers in art.

Offered fall and spring semesters.

ARST 4000. Directed Study in Drawing. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3010 or permission of department. Independent projects for advanced drawing and painting majors. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4020. Figure Drawing/Anatomy. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3000.

Figure drawing with consideration of the human skeletal and muscular systems, surface anatomy, and biomechanical concerns. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 4090. Senior Exit in Drawing. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 3010 and ARST 4020.

Projects in drawing towards the presentation of a BFA exhibition. The course includes preparation for professional activity and/or application to graduate school, and should be taken during last semester of studio course work.

Offered fall and spring semesters.

ARST 4100. Directed Study in Painting. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 2110 and (ARST 3010 or ARST 3120 or ARST 3130 or ARST 3150 or ARST 3160).

Advanced independent study for drawing and painting majors. Studio meetings arranged. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall, spring, and summer semesters.

ARST 4110. Senior Exit in Painting. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 2110 and (ARST 3010 or ARST 3120 or ARST 3130 or ARST 3150 or ARST 3160).

Projects in painting towards the presentation of a BFA exhibition. The course includes preparation for professional activity and/or application to graduate school, and should be taken during last quarter of studio course work.

Offered fall, spring, and summer semesters.

ARST 4200. Advanced Photography. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ARST 3210 and ARST 3220.

Advanced applications of the medium. Experimental camera handling and laboratory work is emphasized. Intensive practice of traditional and new technologies from the photogram to the electronic image. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4210. Special Topics in Photography. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: ARST 3210 and ARST 3220.

Major historical movements in photography including comparative studies of contemporary trends and criticism with an emphasis on research and the development of library archives. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4220. Senior Exhibition and Portfolio. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: ARST 4200.

Creation and presentation of a finished body of original work in photography for BFA degree, with a written statement concerning the work.

Offered fall and spring semesters.

ARST 4300. Printmaking: Internship. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Practical experiences with related professions in the field of print, paper and book collections, and print shops; work with printmaking faculty in the studio or print facility. Course may be taken through UGA Studies Abroad program in Cortona.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

ARST 4310. Senior Exit in Printmaking. 3 hours.

Three 2-hour lab periods.

Prerequisite: Permission of department.

Individual research, creation, and presentation of a finished body of original work in printmaking for senior exhibition or portfolio with written statement and visual documentation.

Offered spring semester.

ARST 4400. Advanced Casting in Metal. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 3450.

Refinement of technical and expressive skills in producing cast metal sculpture. Course may be taken through

UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4410. Advanced Portrait and Figure Sculpture.

3 hours. Three 2-hour lab periods.

Prerequisite: ARST 3460.

Refinement of technical and expressive skills in sculpting the human form. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4420. Sculpture and Spatial Context. 3 hours.

Three 2-hour lab periods.

Production of a fully realized three-dimensional maquette or full scale sculpture beginning with drawing of objects, landscape, architecture, and the human figure. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4430. Advanced Stone Carving. 3 hours. Three 2-hour lab periods.

Refinement of technical and expressive skills in carving stone. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4440. Advanced Construction in Metal. 3 hours.

Three 2-hour lab periods.

Prerequisite: ARST 3410.

Refinement of technical and expressive skills in construction in metal. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4450. Senior Exit in Sculpture. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Directed independent study towards the presentation of a BFA exhibition, including preparation for professional activity and/or application to graduate school.

Offered fall, spring, and summer semesters.

ARST 4500. Advanced Ceramics. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3500.

Specific projects for experienced students selected in consultation with the instructor. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4590. Senior Exit Show in Ceramics. 3 hours.

Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 4500.

Independent study directed towards the presentation of a BFA exhibition, including preparation for a career and/or application to graduate school.

Offered fall, spring, and summer semesters.

ARST 4600. Jewelry. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Studio Art / Artificial Intelligence

Prerequisite: ARST 3610 and ARST 3620.

Advanced design and fabrication of jewelry emphasizing individual research. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4610. Advanced Metalwork. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 3610 and ARST 3620.

Advanced design, forming, and embellishment of metals emphasizing individual research. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4620. BFA Project in Jewelry or Metalwork. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 3610 and ARST 3620.

Directed independent study towards the presentation of a BFA exhibition including preparation for professional activity and/or application to graduate school.

Offered fall and spring semesters.

ARST 4710. BFA Project in Fabric Design. 3 hours. Repeatable for maximum 12 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

Directed independent study towards the presentation of a BFA exhibition, including preparation for professional activity and/or application to graduate school.

Offered fall and spring semesters.

ARST 4720. Fabric Manipulation and Embellishment. 3 hours. Three 2-hour lab periods.

Prerequisite: ARST 1070 and ARST 1080.

Fabric manipulation and embellishment, including technical processes such as shibori (tie dye), layering and piecing of fabrics, surface embellishment, dyeing, and other processes that are not covered in the introduction courses and that are processes not needing horizontal production space.

Offered fall semester.

ARST 4800/6800. Special Topics in Computer Art. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of major.

Computer-generated art and design including advanced computer generated imaging, computer aided drafting, scanned image manipulation, animation, desktop publishing and presentation, and two-dimensional and three-dimensional representation of fiber and sculpture arts.

Offered fall and spring semesters.

ARST 4810/6810. Three-Dimensional Computer Art. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 4800/6800 and permission of major.

Three-dimensional, computer-generated art using modelling, rendering, animation, and output technique.

Offered fall and spring semesters.

ARST 4820/6820. Computer Aided Design. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: ARST 4800/6800.

Contemporary concepts and trends in art computing. The development and presentation of a substantial body of individual imagery is a major aspect of the course.

Offered fall and spring semesters.

ARST 4900. Technical Problems. 3 hours. Repeatable for maximum 9 hours credit. Three 2-hour lab periods.

Prerequisite: Permission of department.

For students qualified to carry out individual projects in studio areas. Course may be taken through UGA Studies Abroad program in Cortona.

Offered fall and spring semesters.

ARST 4910/6910. Aspects of Folk Culture. 3 hours.

Art of folk, self-taught, and visionary artists as distinct from mainstream and academic traditions.

Offered fall and spring semesters.

ARST 4930. Internship in Art. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Supervised experience in a professional environment such as cooperative programs, agencies, or artists' studios.

Non-Traditional Format: The equivalent of lecture or studio course amounting to three credit hours to be agreed upon by the outside agency and the School of Art.

Offered fall and spring semesters.

(ARTI) Artificial Intelligence

College of Arts and Sciences

(ARTI) EPSY (PSYC) 3020. Introduction to Cognitive Science. 3 hours.

Prerequisite: PSYC 1101 or PHIL 1010 or EPSY 2020.

Interdisciplinary study of mind and intelligent activity that forms cognitive sciences. Contributions of psychology, philosophy, linguistics, biology, anthropology, computer science, and education toward uncovering important aspects of the mind and intelligent activity are discussed.

Offered on a regular basis.

(ARTI) CSCI 4540/6540. Symbolic Programming. 3 hours.

Prerequisite: CSCI 1302 or permission of department.

Prerequisite or corequisite: CSCI (PHIL) 4550/6550.

Programming in LISP and PROLOG, with emphasis on artificial intelligence techniques. Other languages used for artificial intelligence work will be presented more briefly.

Offered fall semester.

(ARTS) Art

College of Arts and Sciences, School of Art

ARTS 2000. Art Appreciation. 3 hours.

Understanding painting, sculpture, architecture, and design to enhance aesthetic appreciation.

Offered fall and spring semesters.

ARTS 2050. Cultural Diversity in American Art. 3 hours.

Past and present art created by African Americans, Asian Americans, Hispanic Americans and Native Americans.

Offered fall and spring semesters.

ARTS 4920/6920. Seminar in Contemporary Art. 3 hours.

Contemporary art from the point of view of studio artists.

Offered fall and spring semesters.

ARTS 4960H. Directed Projects in Honors. 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Arranged between student and advisor.

Offered fall, spring, and summer semesters.

ARTS 4970H. Directed Projects in Honors. 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Arranged between student and advisor.

Offered fall, spring, and summer semesters.

ARTS 4980H. Directed Projects in Honors. 3 hours.

Prerequisite: Permission of Honors.

Special projects under the direction of an approved advisor for Honors students of senior division standing.

Non-Traditional Format: Arranged between student and advisor.

Offered fall, spring, and summer semesters.

ARTS 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research under an approved advisor for an Honors student in the field of his/her major or in a closely related field.

Non-Traditional Format: Arranged between student and advisor.

Offered fall, spring, and summer semesters.

(ASTR) Astronomy

College of Arts and Sciences, Department of Physics and Astronomy

ASTR 1010. Introduction to Astronomy. 3 hours.

Not open to students with credit in ASTR 1110H.

Astronomy from early ideas of the cosmos to modern observational techniques. The solar system planets, satellites, asteroids, etc., with emphasis on recent space program findings.

Offered fall and spring semesters.

ASTR 1010L. Introduction to Astronomy Laboratory.

1 hour. One 2-hour lab period.

Not open to students with credit in ASTR 1110L.

Prerequisite or corequisite: ASTR 1010.

Astronomy laboratory to accompany Introduction to Astronomy.

Offered fall and spring semesters.

ASTR 1020. Introduction to Astronomy. 3 hours.

Not open to students with credit in ASTR 1120H.

The study of the sun and stars, their physical properties and evolution, interstellar matter, star clusters, our galaxy and other galaxies, quasars, and the Universe - its beginning and history.

Offered fall and spring semesters.

ASTR 1020L. Introduction to Astronomy Laboratory.

1 hour. One 2-hour lab period.

Not open to students with credit in ASTR 1120L.

Prerequisite or corequisite: ASTR 1020.

Astronomy laboratory to accompany Introduction to Astronomy.

Offered fall and spring semesters.

ASTR 1110H. Introduction to Astronomy (Honors).

3 hours.

Not open to students with credit in ASTR 1010.

Prerequisite: Permission of Honors.

The development of astronomy from ancient times. Telescopes and astronomical observations. The solar system: planets and their satellites, asteroids, comets, etc. The origin and evolution of the solar system.

Offered fall and spring semesters.

ASTR 1110L. Introduction to Astronomy Laboratory (Honors).

1 hour. One 2-hour lab period.

Not open to students with credit in ASTR 1010L.

Prerequisite or corequisite: ASTR 1110H.

Astronomy laboratory to accompany Introduction to Astronomy (Honors).

Offered fall and spring semesters.

ASTR 1120H. Introduction to Astronomy (Honors).

3 hours.

Not open to students with credit in ASTR 1020.

Prerequisite: Permission of Honors.

Our sun and other stars, their physical properties and evolution. Interstellar matter and star formation. The

Astronomy

origin and evolution of our galaxy, other galaxies, quasars and the Universe.

Offered fall and spring semesters.

ASTR 1120L. Introduction to Astronomy Laboratory (Honors). 1 hour. One 2-hour lab period.

Not open to students with credit in ASTR 1020L.

Prerequisite or corequisite: ASTR 1120H.

Astronomy laboratory to accompany Introduction to Astronomy.

Offered fall and spring semesters.

ASTR 1420. Life in the Universe. 3 hours.

The astronomical, chemical and physical conditions for extraterrestrial life. The origins of terrestrial life. Search for extraterrestrial life and extraterrestrial intelligence. Strategies for communication with extraterrestrial intelligence.

Offered fall semester of even-numbered years.

ASTR 1540. Science, Science Fiction, and Pseudoscience. 3 hours.

Science facts versus speculation in science fiction books and films; examples of violations of scientific principles; debunking of UFOs, alien abductions, astrology, creationism and other pseudo-sciences.

Offered spring semester of even-numbered years.

ASTR 1660. History of Astronomy. 3 hours.

Discussion of the historical development of key astronomical ideas from ancient times to the modern age.

Offered fall semester of odd-numbered years.

ASTR 1870. Black Holes. 3 hours.

History and development of general relativity, supernovae and compact objects. Observational evidence for stellar and supermassive black holes. Primordial black holes, wormholes, and the Big Bang. Contributions of Einstein, Chandrasekhar, Oppenheimer, Zwicky, Wheeler, Zel'dovich, Hawking, and Penrose.

Offered spring semester of odd-numbered years.

ASTR 3010. Astronomical Observations and Techniques I. 3 hours.

Prerequisite: ASTR 1020 and ASTR 1020L.

Telescopes and astronomical observations, including photometry and spectroscopy. Laboratory exercises include visual, photographic, and photoelectric observations and data analysis with standard astronomical software.

Offered fall semester of even-numbered years.

ASTR 3020. Astronomical Observations and Techniques II. 3 hours.

Prerequisite: (ASTR 3010 and PHYS 1212-1212L) or permission of department.

Concepts, techniques, skills, and resources needed to plan, obtain, reduce, and interpret observations of astronomical objects.

Offered spring semester of even-numbered years.

ASTR 4010/6010. Astrophysics I. 3 hours.

Prerequisite: ASTR 1010 and ASTR 1020 and PHYS 3700 and PHYS 4101/6101.

Stellar astrophysics, stellar structure and atmospheres, formation of spectral lines and spectral classification, stellar evolution from star formation to planetary nebulae and supernovae and the resulting compact objects.

Offered fall semester of odd-numbered years.

ASTR 4020/6020. Astrophysics II. 3 hours.

Prerequisite: ASTR 4010/6010.

Systems of stars, the interstellar medium and stellar populations, galaxies, their classification and evolution, extragalactic astronomy and cosmology.

Offered spring semester of odd-numbered years.

ASTR 4330/6330. Astronomy Seminar. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: ASTR 1010 and ASTR 1020.

Prerequisite or corequisite: ASTR 3010 or ASTR 3020 or ASTR 4010/6010 or ASTR 4020/6020.

Seminar on contemporary topics in astronomy and astrophysics.

Offered fall and spring semesters.

ASTR 4660. Astronomical Research. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ASTR 3010.

Observations using modern techniques and equipment to investigate astronomical phenomena.

Non-Traditional Format: Independent study and research.

Offered fall and spring semesters.

ASTR 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Meetings with project director will be arranged.

Offered fall and spring semesters.

ASTR 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Meetings with project director will be arranged.

Offered fall and spring semesters.

ASTR 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Meetings will be arranged with thesis advisor.

Offered fall and spring semesters.

(AVMD) Avian Medicine

College of Veterinary Medicine, Department of Avian Medicine

AVMD 3730. Poultry Health. 3 hours.

Prerequisite: POUL 3600 and MIBO 3500 and permission of school.

Common infections, parasitic, and nutritional diseases of poultry: their causes, diagnosis, prevention, and control. Offered to students majoring in poultry science and others who are qualified.

Offered fall semester.

(BCMB) Biochemistry and Molecular Biology

College of Arts and Sciences, Department of Biochemistry and Molecular Biology

BCMB(BIOL)(CHEM) 3100. Introductory Biochemistry and Molecular Biology. 3 hours.

Prerequisite: CHEM 2210 and CHEM 2211L.

The structure and function of biological molecules, enzymology, metabolism and bioenergetics, and recombinant DNA technology.

Offered fall, spring, and summer semesters.

BCMB 4010/6010. Biochemistry and Molecular Biology I. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

A comprehensive treatment of biochemistry and molecular biology stressing structures of biological molecules, including proteins, nucleic acids, carbohydrates, and lipids, enzymology and selected aspects of metabolism and bioenergetics.

Offered fall semester.

BCMB 4020/6020. Biochemistry and Molecular Biology II. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

A comprehensive treatment of biochemistry and molecular biology stressing aspects of metabolism, metabolic regulation, bioenergetics, and recombinant DNA methodologies.

Offered spring semester.

BCMB 4030L/6030L. Laboratory Techniques in Biochemistry and Molecular Biology. 3 hours. One lecture and two 3-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Basic techniques in biochemistry and molecular biology, including enzyme assays and purification, nucleic acid purification and characterization, chromatography, spectroscopy, and other modern methods.

Offered fall semester.

BCMB(CHEM) 4110/6110. Physical Biochemistry. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

The principles of physical chemistry applied to biological molecules and systems, including current approaches in structural biology.

Offered fall semester.

BCMB 4120/6120. Human Biochemistry and Disease. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Integrated treatment of human biochemistry and selected topics on the biochemical basis of human disease. Examples will be given of inheritable and acquired disorders.

Offered fall semester.

BCMB 4130/6130. Biotechnology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Applied aspects of biochemistry and molecular biology in various fields, with emphasis on the use of recombinant DNA methods and protein engineering.

Offered spring semester.

BCMB 4960L. Laboratory Research in Biochemistry and Molecular Biology I. 3-5 hours. 3-5 lab periods of 3 hours per week.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010.

Basic techniques in biochemistry and molecular biology, application of the scientific method, and preparation of a written scientific report. For students with little or no laboratory experience.

Offered fall, spring, and summer semesters.

BCMB 4960H. Laboratory Research in Biochemistry and Molecular Biology I (Honors). 3-5 hours. 3-5 lab periods of 3 hours per week.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or BCMB 4010/6010 or permission of Honors.

Basic techniques in biochemistry and molecular biology, application of the scientific method, and preparation of a written scientific report. For Honors students with little or no laboratory experience.

Offered fall, spring, and summer semesters.

BCMB 4970L. Laboratory Research in Biochemistry and Molecular Biology II. 3-5 hours. Repeatable for maximum 10 hours credit. 3-5 lab periods of 3 hours per week.

Prerequisite: BCMB 4030L/6030L or BCMB 4960H.

Advanced techniques in biochemistry and molecular biology, application of the scientific method, and preparation of a written scientific report. For students with some laboratory experience.

Offered fall, spring, and summer semesters.

BCMB 4970H. Laboratory Research in Biochemistry and Molecular Biology II (Honors). 3-5 hours. Repeatable for maximum 10 hours credit. 3-5 lab periods of 3 hours per week.

Prerequisite: BCMB 4030L/6030L or BCMB 4960H or permission of Honors.

Advanced techniques in biochemistry and molecular biology, application of the scientific method, and preparation of a written scientific report. For Honors students with some laboratory experience.

Offered fall, spring, and summer semesters.

BCMB 4990H. Honors Thesis in Biochemistry and Molecular Biology. 3-5 hours. 3-5 lab periods of 3 hours per week.

Prerequisite: (BCMB 4010/6010 and BCMB 4030L/6030L) or BCMB 4960H or permission of Honors.

Prerequisite or corequisite: BCMB 4020/6020.

Laboratory research in biochemistry and molecular biology under the supervision of a faculty member. A thesis summarizing the literature in the field and the student's research findings is required.

Offered fall, spring, and summer semesters.

(BIOL) Biology

College of Arts and Sciences, Department of Biology

BIOL 1103-1103L. Basic Concepts in Biology. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in BTNY 1210-1210L or BIOL 1107-1107L.

Science as a process, evolution, energy transfer, genetic continuity, complementarity of structure and function, regulation and homeostasis, interdependence in nature. Topics include chemistry of life, cells, cellular energetics, heredity, molecular genetics, growth and development, evolutionary biology, principles of ecology.

Offered fall, spring, and summer semesters.

BIOL 1104-1104L. Organismal Biology. 3 hours. Two lectures and one 2-hour lab period.

Not open to students with credit in BTNY 1220-1220L or BIOL 1108-1108L.

A general biology course focused on organisms, including diversity and phylogeny, structure and function, interaction with the environment, global issues.

Offered fall, spring, and summer semesters.

BIOL 1107-1107L. Principles of Biology I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: CHEM 1211 and CHEM 1211L.

Biological chemistry, cell structure and function, bioenergetics, mitosis and meiosis, genetics, gene expression and regulation, gene technology, population genetics, evolution.

Offered fall, spring, and summer semesters.

BIOL 1107H. Principles of Biology I (Honors). 1 hour.

Not open to students with credit in BIOL 1107-1107L.

Prerequisite: Permission of Honors.

Corequisite: BIOL 1107-1107L.

Seminars, readings, and discussions of topics related to general biology.

Non-Traditional Format: This seminar course meets for 60-90 minutes weekly.

Offered fall and spring semesters.

BIOL 1108-1108L. Principles of Biology II. 4 hours. Three lectures and one 2-hour lab period.

Microbial diversity and physiology; plant and animal diversity, growth, reproduction and physiology; ecology.

Offered fall, spring, and summer semesters.

BIOL 1108H. Principles of Biology II (Honors). 1 hour.

Not open to students with credit in BIOL 1108-1108L.

Prerequisite: Permission of Honors.

Corequisite: BIOL 1108-1108L.

Seminars, readings, and discussion of topics related to general biology.

Non-Traditional Format: This seminar course meets for 60-90 minutes weekly.

Offered fall, spring, and summer semesters.

BIOL 1990. Orientation to Biology Degree Programs. 1 hour.

Introduces students to the Division of Biological Sciences, its departments and the requirements for the biology degree, careers in the biological sciences.

Offered fall and spring semesters.

(BIOL)ENTO 2010. Insects and the Environment. 3 hours.

Designed to acquaint students with our dependence on and interaction with insects in today's world.

Offered fall and spring semesters.

BIOL 2990H. Seminar in Modern Biology (Honors). 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: (BIOL 1103-1103L or BIOL 1104-1104L or BIOL 1107-1107L or BIOL 1108-1108L) and permission of Honors.

Discussion of topics in modern biology with faculty members from the biological sciences. Topics will vary from year to year and several topics will be considered each semester.

Non-Traditional Format: This seminar course meets 60-90 minutes weekly.

Offered fall and spring semesters.

(BIOL)BCMB(CHEM) 3100. Introductory Biochemistry and Molecular Biology. 3 hours.

Prerequisite: CHEM 2210 and CHEM 2211L.

The structure and function of biological molecules, enzymology, metabolism and bioenergetics, and recombinant DNA technology.

Offered fall, spring, and summer semesters.

BIOL 3110L. Basic Skills in the Laboratory. 4 hours. Three 4-hour lab periods.

Prerequisite: BIOL 1107-1107L and CHEM 2211 and CHEM 2211L.

An intensive laboratory course emphasizing acquisition of skills in common use in research laboratories. Techniques range from solution preparation to isolation and analysis of DNA and protein. Includes proper procedures for keeping a laboratory notebook, laboratory safety, and time management.

Offered fall, spring, and summer semesters.

(BIOL)GENE 3204. Genetics. 3 hours.

Prerequisite: (BIOL 1104-1104L or BIOL 1108-1108L) and BCMB(BIOL)(CHEM) 3100.

Genetic mechanisms in viruses, bacteria, and eukaryotic cells in a comparative sense. Topics include molecular genetics and gene action, transfer systems and mapping, cytological, quantitative, and population genetics.

Offered fall, spring, and summer semesters.

(BIOL)CBIO 3300. Developmental Biology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100.

Prerequisite or corequisite: GENE(BIOL) 3204.

Cell differentiation and morphogenesis, primarily in animal development. Gene regulation at the molecular level, gametogenesis, fertilization, normal embryonic development, cell and tissue interactions, hormonal regulation, and developmental aspects of cancer and the immune response.

Offered fall semester.

(BIOL)CBIO 3400. Cell Biology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: BCMB(BIOL)(CHEM) 3100.

Prerequisite or corequisite: GENE(BIOL) 3204.

Structure and function of cells: cell architecture and organization, cell cycle, membrane phenomena, organellogenesis, energy transduction, and cellular control mechanisms.

Offered fall, spring, and summer semesters.

(BIOL)CBIO 3410L. Laboratory in Cellular and Developmental Biology. 4 hours. Two 5-hour lab periods.

Prerequisite: BCMB(BIOL)(CHEM) 3100.

Cell biology research techniques in cell cycle and cell differentiation, cell adhesion, motility, molecular transport, and cell metabolism. Cell culture, cell fractionation, fluorescence and laser-confocal microscopy, electron microscopy, immunocytochemistry, DNA isolation, polymerase chain reaction, and DNA sequencing.

Offered fall and spring semesters.

(BIOL)ECOL 3500-3500L. Ecology. 4 hours. Three lectures and one 3-hour lab period.

Not open to students with credit in GEOG 3210.

Prerequisite: BIOL 1108-1108L and MATH 2200, 2200L and CHEM 1211 and CHEM 1211L.

Population structure and dynamics, organization and

classification of communities, and nutrient and energy flows in ecosystems.

Offered fall and spring semesters.

(BIOL)ECOL 3510. Ecology Laboratory. 3-4 hours.

Repeatable for maximum 10 hours credit.

Prerequisite: ECOL(BIOL) 3500-3500L.

Techniques and methodologies to assess organismal, population, community, or ecosystem interactions.

Non-Traditional Format: A field course taught for blocks of time off-campus (semester breaks or summer). Additional on-campus lecture hours may be added depending upon the field schedule.

Not offered on a regular basis.

BIOL 3700. Animal Behavior. 3 hours.

Prerequisite: BIOL 1108-1108L.

Principles of animal behavior, integrating genetic, physiological, developmental, and evolutionary aspects. Topics include communication, reproduction, sociality, foraging, defense, migration, habitat selection, and learning.

Offered fall semester.

BIOL 3710L. Animal Behavior Laboratory. 3 hours.

Two 3-hour lab periods.

Prerequisite or corequisite: BIOL 3700.

Firsthand experience with diverse living animals illustrates behavior principles and provides experience with methods and techniques of behavior research. Data analysis and written communication of experimental results are important components.

Offered fall semester of odd-numbered years.

(BIOL)CBIO 3800. Neurobiology. 3 hours.

Prerequisite: BIOL 1108-1108L.

Structural organization, cell biology, physiology, development, and integration of the nervous system. This course integrates individual nervous system cells into neural systems for motivation, locomotion, perception, and learning.

Offered spring semester.

BIOL 3900. Readings in Biology. 1-3 hours. Repeatable for maximum 3 hours credit.

Individual study or readings under the direction of a faculty member.

Non-Traditional Format: Individual study or readings under the direction of a faculty member.

Offered fall, spring, and summer semesters.

BIOL 3900H. Readings in Biology (Honors). 1-3 hours. Not open to students with credit in BIOL 3900.

Prerequisite: Permission of Honors.

Individual study or readings under the direction of a faculty member.

Non-Traditional Format: The hours for this reading course are arranged by the student and the professor. Offered fall, spring, and summer semesters.

(BIOL)BTNY(CRSS) 4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL)3204.

Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems. Offered every year on a regular basis.

(BIOL)GENE 4604/6604. Evolutionary Biology. 3 hours.

Prerequisite: BIOL 1108-1108L.

An introduction to the processes of evolution. Topics include population genetics, speciation, systematics, coevolution, chemical origin of life, history of life, geological record, and evolution of humans. Offered fall semester.

BIOL 4960. Undergraduate Research in Biology. 4 hours. Repeatable for maximum 12 hours credit. Three 4-hour lab periods.

Prerequisite: Permission of department.

Laboratory research conducted under the supervision of a faculty member in biological sciences. Arrangements must be made in advance. A final paper/report is required to receive credit toward the Biology major. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

BIOL 4960H. Undergraduate Research in Biology (Honors). 4 hours. Three 4-hour lab periods.

Not open to students with credit in BIOL 4960.

Prerequisite: Permission of Honors.

Laboratory research conducted under the supervision of a faculty member in biological sciences. Arrangements must be made in advance. A final paper/report is required to receive credit toward the Biology major. Non-Traditional Format: Students will meet with faculty members on a regular basis. Offered fall, spring, and summer semesters.

BIOL 4970H. Undergraduate Research in Biology (Honors). 4 hours. Three 4-hour lab periods.

Prerequisite: Permission of Honors.

Laboratory research conducted under the supervision of a faculty member in Biological Sciences. Arrangements must be made in advance. A final paper/report is required.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

BIOL 4980H. Undergraduate Research in Biology (Honors). 4 hours. Three 4-hour lab periods.

Prerequisite: Permission of Honors.

Laboratory research conducted under the supervision of a faculty member in biological sciences. Arrangements must be made in advance. A final paper/report is required.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

BIOL 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Ten hours of research per week.

Offered fall, spring, and summer semesters.

BIOL(CBIO)(VPAT) 5040/7040. Electron Microscopy. 3 hours.

Prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L.

Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray microanalysis, image processing, and image analysis.

Offered fall semester.

BIOL(CBIO) 5050L/7050L. Electron Microscopy Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite or corequisite: BIOL(CBIO)(VPAT) 5040/7040 or permission of department.

Operation of both transmission (TEM) and scanning electron microscopes (SEM). Preparation of specimens (ultramicrotomy, critical point drying, negative staining) for examination in both TEM and SEM. Basics of X-ray microanalysis.

Offered fall and spring semesters.

BIOL 5080. Current Topics in Biology. 3 hours.

Current topics in biology for high school teachers.

Offered on a regular basis.

(BTNY) Botany

College of Arts and Sciences, Department of Botany

BTNY 1210-1210L. Principles of Plant Biology. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in BIOL 1103-1103L or BIOL 1107-1107L.

Basic principles of biology with an emphasis on plants, including science as a process, cell biology, biochemistry, plant structure and function, energy metabolism, genetics, evolution, ecology.

Offered fall and summer semesters.

BTNY 1210H. Principles of Plant Biology (Honors). 1 hour. One 1.5-hour lab period.

Not open to students with credit in BIOL 1103-1103L, BIOL 1107H, or BIOL 1107-1107L.

Prerequisite: Permission of Honors.

Corequisite: BTNY 1210-1210L.

Basic principles of biology with an emphasis on plants, including science as a process, cell biology, biochemistry, plant structure and function, energy metabolism,

genetics, evolution, ecology.
Offered fall semester.

BTNY 1220-1220L. Organismal Plant Biology. 3 hours.
Two lectures and one 2-hour lab period.

Not open to students with credit in BIOL 1040-1040L or BIOL 1108-1108L.

Plant biology course focused on organisms. Topics include evolution and diversity of plants, algae, and fungi; environmental interactions; global environmental issues; ethnobotany.

Offered spring and summer semesters.

BTNY 1220H. Organismal Plant Biology (Honors).

1 hour. One 1.5-hour lab period.

Not open to students with credit in BIOL 1104-1104L, BIOL 1108H, or BIOL 1108-1108L.

Prerequisite: Permission of Honors.

Corequisite: BTNY 1220-1220L.

Plant biology course focused on organisms. Topics include evolution and diversity of plants, algae, and fungi; environmental interactions; global environmental issues; ethnobotany.

Offered spring semester.

(BTNY) PATH (ANTH) 3010. Fungi: Friends and Foes. 3 hours.

Impact of fungi on human affairs. Historical and current uses of fungi by humans as well as the roles of fungi in various ecosystems.

Offered spring semester.

(BTNY) (ANTH) HORT 3440. Herbs, Spices, and Medicinal Plants. 2 hours.

Historical and contemporary significance of herbs, spices, and medicinal plants in human culture and commerce; chemical and biological characteristics; commercial production techniques; application in modern and traditional medical systems.

Offered fall semester.

BTNY 3830-3830L. Plant Physiology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: CHEM 2100 and CHEM 2100L.

Plant physiology for students with cell physiology or biochemistry background. Water relations, mineral nutrition, transport of materials, respiration, photosynthesis, growth and development.

Offered spring semester.

BTNY 3900. Readings in Botany. 1-3 hours. Repeatable for maximum 9 hours credit.

Individual or small group directed readings from scientific journals in a selected area of Botany.

Non-Traditional Format: Independent research.

Offered fall, spring, and summer semesters.

BTNY 3900H. Readings in Botany (Honors). 1-3 hours. Repeatable for maximum 9 hours credit.

Not open to students with credit in BTNY 3900.

Prerequisite: Permission of Honors.

Individual or small group directed readings from scientific journals in a selected area of Botany.

Non-Traditional Format: Independent research.

Offered fall, spring, and summer semesters.

(BTNY) PATH 4200/6200-4200L/6200L. Introductory Mycology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Morphology, biology, and taxonomy of fungi. Representatives of all major groups of fungi are considered. Offered fall semester.

(BTNY) GEOG 4220/6220. Ecological Biogeography. 3 hours.

Prerequisite: GEOG 3210 or ECOL (BIOL) 3500-3500L.

Patterns of plant distribution in contemporary landscapes and underlying processes, including vegetation dynamics, disturbance ecology, biogeomorphology, dendrochronology, and environmental history.

Offered spring semester.

BTNY 4230/6230-4230L/6230L. Plant Anatomy. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or (BTNY 1220-1220L and CBIO (BIOL) 3400) or permission of department.

Structure and growth of meristems; development and structure of cells, tissues, and tissue systems; comparative anatomy of stems, roots, leaves, flowers, and fruits; survey of recent advances in study of growth and development of form and emphasis on experimental approaches. Assumes elementary knowledge of cell and tissue structure.

Offered fall semester.

(BTNY) GEOG 4240/6240. Plant Geography. 3 hours.

Prerequisite: BIOL 1104-1104L and (GEOG 1112 and GEOG 1112L) and [GEOG 3210 or ECOL (BIOL) 3500-3500L].

Phytogeographical zonation, plant-geographic processes, and current potential natural vegetation. Includes physical and environmental factors, plant-environment relationships, plant roles and types, vegetation dynamics, geographic responses to disturbance, and vegetation of main world biomes. Emphasis on global-scale patterns and relationships.

Offered spring semester.

(BTNY) ANTH 4300/6300-4300L/6300L. Ethnobotany. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ANTH 1102 or permission of major.

Ethnobotanical research, with focus on knowledge and utilization of the plant world in traditional societies. Comparisons of societies in tropical forest ecosystems and evaluation of issues relating to intellectual property rights and traditional peoples' knowledge of plant species with potential economic value.

Not offered on a regular basis.

Botany / Cellular Biology

BTNY(BIOL)(CRSS)4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL) 3204.

Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems. Offered every year on a regular basis.

(BTNY)CBIO 4600/6600-4600L/6600L. Biology of Protists. 4 hours. Three lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

Protists (algae, protozoa, and zoospore fungi) with an emphasis on cell structure, evolution, and life histories. Laboratories will concentrate on examination of living and fixed materials and will include methods of isolation and culturing of protists.

Offered spring semester of even-numbered years.

BTNY 4650/6650-4650L/6650L. Plant Taxonomy. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L or permission of department.

History of taxonomy, nomenclature, characters, identification principles, classification, taxonomic relationships, taxonomic literature, species biology, collecting and herbarium, floristic studies.

Offered spring and summer semesters.

BTNY 4850/6850-4850L/6850L. Vegetation Analysis. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (ECOL(BIOL) 3500-3500L and STAT 6220) or permission of department.

Rationale and protocols for various methods of studying vegetation at the population, community and landscape levels. Both field sampling and data analysis techniques will be covered with introduction to several software packages.

Offered spring semester of even-numbered years.

BTNY 4960. Independent Research in Botany. 1-3 hours. Repeatable for maximum 12 hours credit.

Independent research and research participation in a selected area of Botany.

Non-Traditional Format: Independent research.

Offered fall, spring, and summer semesters.

BTNY 4960H. Independent Research in Botany (Honors). 3 hours.

Not open to students with credit in BTNY 4960.

Prerequisite: Permission of Honors.

Independent research and research participation for Honors students in a selected area of Botany.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

BTNY 4970H. Independent Research in Botany (Honors). 3 hours.

Prerequisite: Permission of Honors.

Independent research and research participation for Honors students in a selected area of Botany.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

BTNY 4980H. Independent Research in Botany (Honors). 3 hours.

Prerequisite: Permission of Honors.

Independent research and research participation for honors students in a selected area of Botany.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

BTNY 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Independent research and research participation for Honors students in a selected area of Botany.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

(CBIO) Cellular Biology

College of Arts and Sciences, Department of Cellular Biology

CBIO 2200-2200L. Human Anatomy. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in CBIO 3200-3200L. Human anatomy for allied health science students. Structure and function of organ systems at gross and tissue levels. Cadaver demonstration laboratory. Not open to pre-medical, pre-dental, or pre-veterinarian students.

Offered fall, spring, and summer semesters.

CBIO 2210-2210L. Human Physiology. 4 hours. Three lectures and one 2-hour lab period.

Human physiology for the allied health sciences: pre-nursing, pre-physical therapy, and physical education students.

Offered fall, spring, and summer semesters.

CBIO 3000-3000L. Comparative Vertebrate Anatomy. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in ECOL(FORS) 3260-3260L.

Prerequisite or corequisite: BIOL 1108-1108L.

Comparative systemic vertebrate anatomy emphasizing structure and function.

Offered spring semester.

CBIO 3200-3200L. Human Anatomy. 4 hours. Four lectures and one 2-hour lab period.

Not open to students with credit in CBIO 2200-2200L. Prerequisite: BIOL 1108-1108L.

Anatomy of human organ systems. Emphasizes cellular and tissue structure and developmental origins.
Offered fall semester.

CBIO(BIOL) 3300. Developmental Biology. 3 hours.
Prerequisite: BCMB(BIOL)(CHEM) 3100.
Prerequisite or corequisite: GENE(BIOL) 3204.
Cell differentiation and morphogenesis, primarily in animal development. Gene regulation at the molecular level, gametogenesis, fertilization, normal embryonic development, cell and tissue interactions, hormonal regulation, and developmental aspects of cancer and the immune response.
Offered fall semester.

CBIO(BIOL) 3400. Cell Biology. 3 hours. Three lectures and one 1-hour lab period.
Prerequisite: BCMB(BIOL)(CHEM) 3100.
Prerequisite or corequisite: GENE(BIOL) 3204.
Structure and function of cells: cell architecture and organization, cell cycle, membrane phenomena, organellogenesis, energy transduction, and cellular control mechanisms.
Offered fall, spring, and summer semesters.

CBIO(BIOL) 3410L. Laboratory in Cellular and Developmental Biology. 4 hours. Two 5-hour lab periods.
Prerequisite: BCMB(BIOL)(CHEM) 3100.
Cell biology research techniques in cell cycle and cell differentiation, cell adhesion, motility, molecular transport, and cell metabolism. Cell culture, cell fractionation, fluorescence and laser-confocal microscopy, electron microscopy, immunocytochemistry, DNA isolation, polymerase chain reaction, and DNA sequencing.
Offered fall and spring semesters.

CBIO 3700. Principles of Animal Physiology. 3 hours.
Prerequisite: BIOL 1108-1108L.
Physiology and variations related to lifestyle and complexity among animals. Cellular bases of organismic function: homeostasis, neural and endocrine function, muscle function, metabolism, secretion, absorption, osmoregulation, and thermoregulation.
Offered fall semester of odd-numbered years.

CBIO(BIOL) 3800. Neurobiology. 3 hours.
Prerequisite: BIOL 1108-1108L.
Structural organization, cell biology, physiology, development, and integration of the nervous system. This course integrates individual nervous system cells into neural systems for motivation, locomotion, perception, and learning.
Offered spring semester.

CBIO(MIBO) 4100/6100. Immunology. 3 hours.
Prerequisite: BCMB(BIOL)(CHEM) 3100 and GENE(BIOL) 3204.
Immunology from an experimental perspective. Anatomy, development, and function of the immune system. Immune system in infectious diseases. Mechanisms and pathogenesis of immunological disorders.

Evolution of immunological concepts.
Offered fall semester.

CBIO 4340/6340. Biology of Aging. 3 hours.
Prerequisite: Permission of department.
Biological processes accompanying aging in human and other organisms. Emphasis on physiological decline; theoretical explanations; attempts to prolong life; and the utility and limitations of model systems used to analyze human aging.
Offered spring semester.

CBIO 4500/6500-4500L/6500L. Medical Parasitology. 4 hours. Three lectures and two 2-hour lab periods.
Prerequisite: BIOL 1108-1108L.
Major protozoan and metazoan endo- and ectoparasites of humans. Principles of parasitism and general biology of each parasite. Vector biology, epidemiology, control, and treatment of parasitic diseases are discussed. Laboratory stresses diagnosis and identification, and introduces pathology through the use of fixed and living material.
Offered spring semester of odd-numbered years.

CBIO(BTNY) 4600/6600-4600L/6600L. Biology of Protists. 4 hours. Three lectures and two 2-hour lab periods.
Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.
Protists (algae, protozoa, and zoospore fungi) with an emphasis on cell structure, evolution, and life histories. Laboratories will concentrate on examination of living and fixed materials and will include methods of isolation and culturing of protists.
Offered spring semester of even-numbered years.

CBIO 4730/6730. Endocrinology. 3 hours.
Prerequisite: BIOL 1108-1108L or permission of department.
Vertebrate endocrinology and the principles of chemical integration, emphasizing the physiology of regulatory mechanisms and the cellular and molecular bases of hormone action.
Offered fall semester.

CBIO 4960H. Directed Reading and/or Laboratory Research (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or laboratory research directed by faculty of the Cellular Biology department.
Offered fall, spring, and summer semesters.

CBIO 4970. Directed Reading. 1-3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of department.
Oral and written evaluation of original papers and reviews in cellular biology directed by a member of the department faculty.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

CBIO 4970H. Directed Reading and/or Laboratory Research (Honors). 4 hours.

Not open to students with credit in CBIO 4970.

Prerequisite: Permission of Honors.

Individual study, reading, or laboratory research directed by faculty of the Cellular Biology department.

Non-Traditional Format: Independent research under the direction of a faculty member.

Offered fall, spring, and summer semesters.

CBIO 4980. Research in Cellular Biology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent laboratory research directed by departmental faculty members. Two semesters may fulfill the departmental techniques requirement.

Non-Traditional Format: Independent research under the direction of a faculty member.

Offered fall, spring, and summer semesters.

CBIO 4980H. Directed Reading and/or Laboratory Research (Honors). 3 hours.

Not open to students with credit in CBIO 4980.

Prerequisite: Permission of Honors.

Individual study, reading, or laboratory research directed by faculty of the cellular biology department.

Non-Traditional Format: Independent research under the direction of a faculty member.

Offered fall, spring, and summer semesters.

CBIO 4990. Seminar in Cellular Biology. 1 hour. Repeatable for maximum 3 hours credit. One 1-hour lab period.

Presentation of original research and critical surveys of cellular biology literature. Required of all cellular biology majors.

Offered fall and spring semesters.

CBIO 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Preparation of Honors thesis under supervision of departmental faculty.

Non-Traditional Format: Independent research and thesis preparation.

Offered fall, spring, and summer semesters.

(CBIO)BIOL(VPAT) 5040/7040. Electron Microscopy. 3 hours.

Prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L.

Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray microanalysis, image processing, and image analysis.

Offered fall semester.

(CBIO)BIOL 5050L/7050L. Electron Microscopy Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite or corequisite: BIOL(CBIO)(VPAT) 5040/7040 or permission of department.

Operation of both transmission (TEM) and scanning

electron microscopes (SEM). Preparation of specimen (ultramicrotomy, critical point drying, negative stain ing) for examination in both TEM and SEM. Basics of X-ray microanalysis.

Offered fall and spring semesters.

(CHEM) Chemistry

College of Arts and Sciences, Department of Chemistry

CHEM 1110. Elementary Chemistry. 3 hours.

A one-semester, non-mathematical study of chemical principles with an emphasis on environmental issues

Offered fall and spring semesters.

CHEM 1110L. Elementary Chemistry Laboratory. 1 hour. One 3-hour lab period.

Corequisite: CHEM 1110.

Laboratory experiments performed to illustrate the reactions, principles, and techniques presented in Elementary Chemistry.

Offered fall and spring semesters.

CHEM 1211. Freshman Chemistry I. 3 hours.

Not open to students with credit in CHEM 1311H or CHEM 1411.

Prerequisite or corequisite: MATH 1113.

The chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered fall, spring, and summer semesters.

CHEM 1211L. Freshman Chemistry Laboratory I. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 1311L or CHEM 1411L.

Corequisite: CHEM 1211.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Freshman Chemistry I.

Offered fall, spring, and summer semesters.

CHEM 1212. Freshman Chemistry II. 3 hours.

Not open to students with credit in CHEM 1312H or CHEM 1412.

Prerequisite: CHEM 1211.

Second semester of an in-depth study of the chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered fall, spring, and summer semesters.

CHEM 1212L. Freshman Chemistry Laboratory II. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 1312L or CHEM 1412L.

Prerequisite: CHEM 1211L.

Corequisite: CHEM 1212.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Freshman Chemistry II.

Offered fall, spring, and summer semesters.

CHEM 1311L. Advanced Freshman Chemistry Laboratory I (Honors). 1 hour. One 3-hour lab period.
Not open to students with credit in CHEM 1211L or CHEM 1411L.

Prerequisite or corequisite: MATH 1113.

Corequisite: CHEM 1311H.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Advanced Freshman Chemistry I.

Offered fall semester.

CHEM 1311H. Advanced Freshman Chemistry I (Honors). 3 hours.

Not open to students with credit in CHEM 1211 or CHEM 1411.

Prerequisite: Permission of Honors.

Prerequisite or corequisite: MATH 1113.

The chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered fall semester.

CHEM 1312L. Advanced Freshman Chemistry Laboratory II (Honors). 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 1212L or CHEM 1412L.

Prerequisite: CHEM 1311L.

Corequisite: CHEM 1312H.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Advanced Freshman Chemistry II.

Offered spring semester.

CHEM 1312H. Advanced Freshman Chemistry II (Honors). 3 hours.

Not open to students with credit in CHEM 1212 or CHEM 1412.

Prerequisite: CHEM 1311H and permission of Honors.

Second semester of a rigorous in-depth study of the chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered spring semester.

CHEM 1411. Advanced Modern Chemistry I. 3 hours.

Not open to students with credit in CHEM 1211 or CHEM 1311H.

Prerequisite or corequisite: MATH 1113.

First semester of a rigorous in-depth study of the chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered fall semester.

CHEM 1411L. Advanced Modern Chemistry Laboratory I. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 1211L or CHEM 1311L.

Prerequisite or corequisite: MATH 1113.

Corequisite: CHEM 1411.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Advanced Modern Chemistry I.

Offered fall semester.

CHEM 1412. Advanced Modern Chemistry II. 3 hours.
Not open to students with credit in CHEM 1212 or CHEM 1312H.

Prerequisite: CHEM 1411.

Second semester of a rigorous in-depth study of the chemical principles involved in stoichiometry, structure, bonding, and reactivity.

Offered spring semester.

CHEM 1412L. Advanced Modern Chemistry Laboratory II. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 1212L or CHEM 1312L.

Prerequisite: CHEM 1411L.

Corequisite: CHEM 1412.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Advanced Modern Chemistry II.

Offered spring semester.

CHEM 2100. Elementary Organic Chemistry. 3 hours.

Not open to students with credit in CHEM 2211.

Prerequisite: CHEM 1110 or CHEM 1211 or CHEM 1411.

A brief one-semester introduction to organic chemistry, covering elementary aspects of nomenclature, structures, and common reactions of organic compounds.

Offered fall and spring semesters.

CHEM 2100L. Elementary Organic Chemistry Laboratory. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 2211L.

Corequisite: CHEM 2100.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Elementary Organic Chemistry.

Offered fall and spring semesters.

CHEM 2211. Modern Organic Chemistry I. 3 hours.

Not open to students with credit in CHEM 2100.

Prerequisite: CHEM 1211 or CHEM 1411.

First semester of a two-semester sequence of organic chemistry for students majoring in sciences and for pre-medical, pre-dental, pre-pharmaceutical, and pre-veterinarian students.

Offered fall, spring, and summer semesters.

CHEM 2211L. Modern Organic Chemistry I Laboratory. 1 hour. One 3-hour lab period.

Not open to students with credit in CHEM 2100L.

Corequisite: CHEM 2211.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Modern Organic Chemistry I.

Offered fall, spring, and summer semesters.

CHEM 2212. Modern Organic Chemistry II. 3 hours.

Prerequisite: (CHEM 1212 or CHEM 1412) and CHEM 2211.

Second semester of a two-semester sequence of organic chemistry for students majoring in sciences and

Chemistry

for pre-medical, pre-dental, pre-pharmaceutical, and pre-veterinarian students.
Offered fall and spring semesters.

CHEM 2212L. Modern Organic Chemistry Laboratory II. 1 hour. One 3-hour lab period.
Corequisite: CHEM 2212.

Students will perform experiments to illustrate the reactions, principles, and techniques presented in Modern Organic Chemistry II.
Offered fall and spring semesters.

CHEM 2300. Quantitative Analytical Chemistry. 3 hours.

Prerequisite: CHEM 1212 or CHEM 1412.
Quantitative analysis using statistical evaluation of data, gravimetric, volumetric, and selected instrumental methods, including spectrophotometry and separations.

Offered fall and spring semesters.

CHEM 2300L. Quantitative Analytical Chemistry Laboratory. 1 hour. One 3-hour lab period.

Corequisite: CHEM 2300.
Selected quantitative analytical chemical topics, including gravimetric and volumetric methods, potentiometry, spectrophotometry, and separations.
Offered fall and spring semesters.

CHEM 2600. Introduction to Research I. 1-4 hours.
Repeatable for maximum 4 hours credit.

Prerequisite: CHEM 1211 or CHEM 1411.
Students will pursue directed research with a chosen faculty member, and will prepare a written report of their research progress for credit.

Non-Traditional Format: Students are expected to spend four hours per week in the research laboratory for each hour of credit.

Not offered on a regular basis.

(CHEM)BCMB(BIOL) 3100. Introductory Biochemistry and Molecular Biology. 3 hours.

Prerequisite: CHEM 2210 and CHEM 2211L.
The structure and function of biological molecules, enzymology, metabolism and bioenergetics, and recombinant DNA technology.
Offered fall, spring, and summer semesters.

CHEM 3211. Modern Physical Chemistry I. 3 hours.
Prerequisite: MATH 2210, 2210L and PHYS 1212-1212L.

The first semester of a two-semester sequence covering basic concepts and techniques of physical chemistry. The level of coverage is designed for chemistry majors.
Offered fall semester.

CHEM 3212. Modern Physical Chemistry II. 3 hours.
Prerequisite: CHEM 3211.

The second semester of a two-semester sequence covering basic concepts and techniques of physical chemistry. The level of coverage is designed for chemistry majors.
Offered spring semester.

CHEM 3300. Modern Instrumental Methods of Analysis. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2300.

Prerequisite or corequisite: CHEM 2212.

Advanced topics in analytical chemistry. Fundamental principles of quantitative instrumental methods of analysis, including elementary aspects of instrumentation and signal processing; absorption, emission and scattering methods of optical spectrometry; mass spectrometry; electrochemistry; and separations.

Offered fall semester.

CHEM 3400. Modern Inorganic Chemistry. 3 hours.
Prerequisite: CHEM 3211.

Modern inorganic chemistry, including structure and bonding in solids, advanced concepts in periodicity descriptive inorganic, organometallic, and bioinorganic chemistry.

Offered spring semester.

CHEM 3511L. Experimental Methods Laboratory I. 3 hours. Three 3-hour lab periods.

Prerequisite or corequisite: [BCMB (BIOL) (CHEM 3100 or CHEM 3211)] and CHEM 3300.

An integrated laboratory incorporating elements of instrumental analysis, physical chemistry, and inorganic chemistry. Primary emphasis will be on fundamental aspects of each of the above disciplines.

Offered fall semester.

CHEM 3512L. Experimental Methods Laboratory II. 3 hours. Three 3-hour lab periods.

Prerequisite: CHEM 3511L.

Prerequisite or corequisite: CHEM 3212 and CHEM 3400.

Inorganic chemistry, physical chemistry, and instrumental analysis. Synthesis and modern physical and chemical methods of characterization.

Offered spring semester.

CHEM 3600. Introduction to Research II. 1-4 hours.
Repeatable for maximum 4 hours credit.

Prerequisite: CHEM 2211.

Students will pursue directed research with a chosen faculty member, and will prepare a written report of their research progress for credit.

Non-Traditional Format: Students will spend four hours per week in the research laboratory for each hour of credit.

Not offered on a regular basis.

CHEM 4100. Special Topics in Organic Chemistry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: CHEM 2212 and CHEM 2300.

Advanced concepts in organic chemistry will be presented, the detailed content varying from year to year.
Offered fall semester of even-numbered years.

(CHEM)BCMB 4110/6110. Physical Biochemistry. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

The principles of physical chemistry applied to biological molecules and systems, including current approaches in structural biology.

Offered fall semester.

CHEM 4190/6190. Introduction to NMR Spectroscopy. 3 hours. Two lectures and one 3-hour lab period. Instrumental aspects of NMR spectroscopy including pulsed Fourier transform techniques, proton and carbon-13 techniques used in the analysis of organic compounds, polypeptides and other small molecules. The focus is on the operation of NMR spectrometers presently available in the University of Georgia Chemistry Department.

Offered fall semester.

CHEM 4200. Special Topics in Physical Chemistry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: CHEM 2212 and CHEM 2300.

Advanced concepts in physical chemistry will be presented, the detailed content varying from year to year. Offered spring semester of even-numbered years.

CHEM 4300. Special Topics in Analytical Chemistry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: CHEM 2212 and CHEM 2300.

Advanced concepts in analytical chemistry will be presented, the detailed content varying from year to year.

Offered spring semester of odd-numbered years.

CHEM 4400. Special Topics in Inorganic Chemistry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: CHEM 2212 and CHEM 2300.

Advanced concepts in inorganic chemistry will be presented, the detailed content varying from year to year.

Offered fall semester of odd-numbered years.

CHEM 4500. Introduction to the Chemical Literature. 3 hours.

Prerequisite: CHEM 2212 and CHEM 2300.

Modern information technology and its uses in accessing the chemical scientific literature. Computer- and web-based databases and search engines will be described and demonstrated. Students will also receive hands-on training in presentation and verbal communication skills.

Non-Traditional Format: Lectures will be given in a master classroom with student access to workstations. Offered fall semester.

CHEM 4600. Independent Research. 4 hours.

Prerequisite: CHEM 2212 and CHEM 2300.

Students will pursue directed research with a chosen faculty member, and will prepare a written report of their research progress for credit.

Non-Traditional Format: Students will spend four hours in the research laboratory for each hour of credit.

Not offered on a regular basis.

(CHFD) Child and Family Development

*College of Family and Consumer Sciences,
Department of Child and Family Development*

CHFD 2000. Introduction to Family and Consumer Sciences. 1 hour.

The specialties and professions comprising the fields in family and consumer sciences. Systems perspective is emphasized in examining quality of life issues. Discussions include the personal, professional, and technical elements involved in career development.

Offered fall and spring semesters.

CHFD 2100. Development Within the Family. 3 hours. Ecological approach to individual development and interpersonal relationships through consideration of family processes across the life span. Practice in application of principles.

Offered fall and spring semesters.

CHFD 2950-2950L. Introduction to Child Development. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: PSYC 1101.

Physical, cognitive, social, and emotional development of children from birth through adolescence.

Offered fall and spring semesters.

CHFD 3010. Special Problems in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Independent study and research.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CHFD 3110. Professional Development/Community Activities. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Career opportunities related to child and family development and preparation needed to enhance successful career development.

Non-Traditional Format: Individualized instruction organized as lectures and service learning experiences.

Offered fall and spring semesters.

CHFD 3700. Adolescence and Young Adulthood Survey. 3 hours.

Prerequisite: CHFD 2950-2950L.

Adolescent and young adult development in the context of families. Special attention is given to the transactional nature of adolescent/young adult and family development, with application of theory and research to understanding problems associated with adolescence and early adulthood.

Offered fall and spring semesters.

Child and Family Development

CHFD 3710. Midlife/Elder Years Survey. 3 hours.

Prerequisite: CHFD 2100 and CHFD 2950-2950L.

Individual and family development during middle and later years. Emphasis is on importance of physical, psychological, and social development within multi-generational relationships.

Offered fall and spring semesters.

CHFD 3900. Prenatal and Infant Development. 3 hours.

Prerequisite: CHFD 2950-2950L.

Growth and development from conception to second year of life. Guidance of infants and toddlers within family and group care settings.

Offered fall and spring semesters.

CHFD 3920. Issues in Family Systems. 3 hours.

Prerequisite: CHFD 2100.

Family processes and transition throughout the life span. Emphasis is on contemporary issues relevant to families.

Offered fall and spring semesters.

CHFD 3930. Development of Interpersonal Relationships. 3 hours.

Prerequisite: CHFD 2100 or PSYC 1101 or SOCI 1101.

Developmental approach to close relationships. Includes processes of attraction, interdependence, love, commitment, and conflict. A variety of close relationships is explored in various contexts, including friendships, romance, and family relationships.

Offered spring semester.

(CHFD)EDEC 4010. Orientation to Early Childhood Education. 1 hour.

Prerequisite: Permission of department.

Translation of theories about how children learn into ideas for application in the classroom. Bases for developmentally appropriate practices are examined in light of the students' own experiences as learners.

Offered fall and spring semesters.

(CHFD)EDEC 4020. Decision Making for Planning, Teaching, and Organizing Early Childhood Classrooms. 3 hours.

Prerequisite: Permission of department.

Reflective decision making that incorporates the major themes, concepts, and skills involved in organizing, planning, and developing instruction in early childhood classrooms.

Offered fall and spring semesters.

(CHFD)EDEC 4030. Integrated Curricular Practices in Early Childhood Education. 3 hours.

Prerequisite: Permission of department.

Develop philosophical perspectives of teaching and classroom management, consider effective parent-teacher relations, and connect with the wider community as a resource context for teaching and learning. Plan and teach an integrated, thematic curriculum unit for prekindergarten through grade five as part of the field component.

Offered fall and spring semesters.

(CHFD)EDEC 4040. Special Topics in Early Childhood Education. 3 hours.

Corequisite: EDEC(CHFD) 5460.

A forum for issues of professionalism connected to professional teaching experiences. Topics may vary depending on student-generated issues and concerns. Offered on a regular basis.

CHFD 4090/6090. Advanced Infant Development. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CHFD 3900.

Emotional, social, cognitive, and physical development in infancy. Supervised observation in Infant Center and in selected homes.

Offered spring semester.

CHFD 4120. Child Care, Work, and the Family. 3 hours.

Prerequisite: CHFD 2100 and CHFD 2950-2950L.

A developmental-contextual analysis of child care, work, and family functioning. Examination of current child care arrangements to work roles in families, historical and cross-cultural comparisons of child care and family work patterns, and the developmental impact of child care and work on family members. Policy implications discussed.

Offered spring semester of even-numbered years.

CHFD 4130. Family Policy. 3 hours.

Prerequisite: CHFD 2100 and CHFD 2950-2950L.

Relevance of government and business policies to the lives of children and families. Assessment of the influence of policies using criteria drawn from the field of child and family development.

Offered fall semester.

CHFD 4330. Diversity in Human Development and Family Systems. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Variability in family development, organization, identity structure, and values with an emphasis on culture, gender, race, ethnicity, sexual orientation, and physical characteristics of family members.

Offered spring semester of odd-numbered years.

CHFD(HACE) 4500/6500. Second Half of Life. 3 hours.

Prerequisite: Junior standing or permission of department.

Second half of life; resource management, living patterns, and housing, sexuality, roles, family relationships, community and organization involvement, and career opportunities.

Offered spring semester of odd-numbered years.

CHFD 4600/6600. Older Individuals. 3 hours.

Prerequisite: CHFD(HACE) 4500/6500.

Older individuals in marriage, family, and society. Special attention given to marital relationships, widowhood, parent and adult-child relationships and care

giving, social networks and ecological issues as they affect older individuals and their families.
Offered fall semester of odd-numbered years.

CHFD(SOCI) 4610/6610. The Family. 3 hours.
Prerequisite: Undergraduate level only: CHFD 2100.
Family study utilizing data from the fields of anthropology, individual and social psychology, history, sociology, economics, and psychiatry.
Not offered on a regular basis.

CHFD 4620/6620. Women in the Family and Society. 3 hours.
Prerequisite: Junior or senior standing or permission of department.
Women's experiences and gender issues in relation to family and individual development. Research and policy implications are examined.
Offered fall semester of even-numbered years.

CHFD 4700/6700. The Family and Adolescence. 3 hours.
Prerequisite: Undergraduate level only: CHFD 3700.
Advanced consideration of unique features of the family that includes an adolescent member. Special attention is given to dual processes of adolescent development and family development.
Offered spring semester of even-numbered years.

CHFD 4810/6810. Hospitalized Child and the Family. 3 hours.
Prerequisite: Undergraduate level only: CHFD 2100 and CHFD 2950-2950L and permission of department.
Developmental and psychosocial issues of hospitalized children and their families. Organization and services in health care settings investigated.
Offered spring semester.

CHFD 4850/6850. Family Development. 3 hours.
Prerequisite: Undergraduate level only: CHFD 2100 or SOCI 1101.
Families as social groups that develop their own patterns, meanings, and processes across family life cycle in both conventional and alternative family forms.
Offered spring semester of even-numbered years.

CHFD 4860/6860. Parent Education and Child Guidance. 3 hours.
Prerequisite: Undergraduate level only: CHFD 2100 and CHFD 2950-2950L.
Application of theory, research, and developmental practice to understanding the role of parents, teachers, and community leaders in guiding the behavior of children from birth through adolescence, and to establishing mutually satisfying parent-child relationships through the life cycle. Programs for parents and parental interactions with schools and other social institutions.
Offered spring semester of odd-numbered years.

CHFD 4870/6870. Human Sexuality Across the Life Span. 3 hours.
Prerequisite: Undergraduate level only: CHFD 2100.
Attitudes toward and values associated with human sexuality, based on substantive and theoretical information, with emphasis on how development and interactions across the life span are affected by familial, social, cultural, and psychological factors.
Offered spring semester of even-numbered years.

CHFD 4960H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Non-Traditional Format: Directed study.
Offered fall and spring semesters.

CHFD 4970H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Non-Traditional Format: Directed study.
Offered fall and spring semesters.

CHFD 4980H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Non-Traditional Format: Directed study.
Offered fall and spring semesters.

CHFD 4990H. Honors Thesis. 3 hours.
Prerequisite: Permission of Honors.
Individual research in Child and Family Development or a closely related field.
Non-Traditional Format: Individual research with a faculty member.
Offered fall and spring semesters.

CHFD 5100. Family Intervention. 3 hours.
Prerequisite: Senior standing or permission of department.
Theoretical concepts and behavioral skills as applied to the intervention process with help-seeking individuals and families.
Offered fall semester of odd-numbered years.

CHFD 5110. Research Methods in Child and Family Development. 3 hours.
Prerequisite: Senior standing or permission of department.
The evaluation of research in the field of Child and Family Development and common problems incurred in applied research which affect the interpretation of data.
Offered spring semester of odd-numbered years.

Child and Family Development

CHFD 5120/7120. Observation and Assessment Techniques. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2950-2950L.

Directed experiences in observing, recording, and assessing behavior and interaction among children and families, and examination of program assessment.

Offered fall semester of even-numbered years.

CHFD 5130/7130. Creative Activities for Young Children. 3 hours.

Prerequisite: CHFD 4860/6860.

Quality individual and group programming for young children based upon current theory, research, and developmentally appropriate practice. Special emphasis will be placed upon the integration of creative activities including art, music, movement, nutrition, health, dramatic play and computer applications.

Offered spring semester of even-numbered years.

CHFD 5140/7140. Group Programs for Young Children. 9 hours. Five lectures and four 4-hour lab periods.

Prerequisite: Undergraduate level only: CHFD 3900. Developmental and educational theories applied to the design, content, and implementation of group programs for young children.

Not offered on a regular basis.

CHFD(EDEC) 5150. Families, Schools, and Communities. 3 hours.

Prerequisite: CHFD 3920 and EDEC(CHFD) 4020 and CHFD 4860/6860 and permission of department.

Families and their relationship with schools and communities. Implications for selected areas of practice, such as early childhood educational practices, emphasized.

Offered fall semester of odd-numbered years.

CHFD 5160L/7160L. Administration of Children's Programs. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHFD 4860/6860 and CHFD 5140/7140.

Theories and administration of child care programs. Topics include planning, scheduling, enrollment, certification, and evaluation. Laboratory work required.

Not offered on a regular basis.

(CHFD)EDEC 5460. Student Teaching in Early Childhood Education. 3-15 hours.

A prekindergarten through grade five classroom teaching experience under the direction of a teacher and an early childhood education faculty member.

Non-Traditional Format: Student teaching/field based in schools.

Offered fall and spring semesters.

CHFD 5710/7710. Study Tour in Child and Family Development. 3-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Selected topics in child and family development. Com-

bined with site visits to relevant locations.

Non-Traditional Format: Lecture, tour, and other activities for the length of the program.

Offered summer semester.

CHFD 5900/7900. Preinternship Orientation. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Junior or senior standing or permission of department.

Orientation to and preparation for doing an internship.

Offered fall and spring semesters.

CHFD 5910/7910. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in settings with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

CHFD 5920/7920. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in programs for children under six with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

CHFD 5930/7930. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in human development programs with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

CHFD 5940/7940. Internship in Child and Family Development. 1-12 hours.

Prerequisite: Permission of department.

Supervised professional practice in special needs programs with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

CHFD 5950/7950. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised professional practice in administrative programs with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

CHFD 5960/7960. Internship in Child and Family Development. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: CHFD 5900/7900 and permission of department.

Supervised professional practice in Child Life programs with employed persons with a degree in Child and Family Development or related field.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

(CHNS) Chinese

College of Arts and Sciences, Department of Comparative Literature

CHNS 1001. Elementary Chinese I. 4 hours.

Fundamentals of grammar, pronunciation, composition, and conversation.

Offered fall semester.

CHNS 1002. Elementary Chinese II. 4 hours.

Prerequisite: CHNS 1001.

A continuation of Elementary Chinese I.

Offered spring semester.

CHNS 2001. Intermediate Chinese I. 3 hours.

Prerequisite: CHNS 1002.

Intermediate grammar, reading, conversation, and composition.

Offered fall semester.

CHNS 2002. Intermediate Chinese II. 3 hours.

Prerequisite: CHNS 2001 or permission of department.

A continuation of Intermediate Chinese I.

Offered spring semester.

CHNS 3010. Advanced Chinese I. 3 hours.

Prerequisite: CHNS 2002 or permission of department.

Advanced grammar, reading, conversation, and composition.

Offered fall semester.

CHNS 3020. Advanced Chinese II. 3 hours.

Prerequisite: CHNS 3010 or permission of department.

A continuation of Advanced Chinese I.

Offered spring semester.

CHNS 3990. Directed Study in Chinese Language and/or Literature. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent study and research under the direction of individual faculty members.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

(CLAS) Classical Culture

College of Arts and Sciences, Department of Classics

CLAS 1000. Greek Culture. 3 hours.

Not open to students with credit in CLAS 1000H.

The characteristics of Greek literature and culture, taught principally through translations of selections from Greek authors. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Offered fall, spring, and summer semesters.

CLAS 1000H. Greek Culture (Honors). 3 hours.

Not open to students with credit in CLAS 1000.

Prerequisite: Permission of Honors.

The characteristics of Greek literature and culture, taught principally through translations of selections from Greek authors. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Offered fall, spring, and summer semesters.

CLAS 1010. Roman Culture. 3 hours.

Not open to students with credit in CLAS 1010H.

The characteristics of Roman literature and culture, taught principally through translations of selections from Roman authors. Course may be taken through UGA Studies Abroad program in Rome.

Offered fall, spring, and summer semesters.

CLAS 1010H. Roman Culture (Honors). 3 hours.

Not open to students with credit in CLAS 1010.

Prerequisite: Permission of Honors.

The characteristics of Roman literature and culture, taught principally through translations of selections from Roman authors. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Offered fall, spring, and summer semesters.

CLAS 1020. Classical Mythology. 3 hours.

Not open to students with credit in CLAS 1020H.

The myths and sagas of the Greeks and Romans, taught in particular through ancient literature. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Offered fall, spring, and summer semesters.

CLAS 1020H. Classical Mythology (Honors). 3 hours.

Not open to students with credit in CLAS 1020.

Prerequisite: Permission of Honors.

The myths and sagas of the Greeks and Romans, taught in particular through ancient literature. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Offered fall, spring, and summer semesters.

Classical Culture

CLAS 1030. Medical Terminology. 3 hours.

Medical terminology derived from Greek and Latin, concentrating on the meanings of the components of medical terms and the principles that govern their arrangement, with some attention to the history of ancient medicine.

Offered fall, spring, and summer semesters.

CLAS(ANTH) 2000. Introduction to Classical Archaeology. 3 hours.

Concepts and principles of archaeology, including site formation, survey and excavation techniques, artifact retrieval and analysis, chronology, archaeological theory, and contemporary issues such as "ownership" of the past; focus on sites from Greek and Roman antiquity.

Offered fall, spring, and summer semesters.

CLAS(LING) 2010. The Nature of the English Vocabulary. 3 hours.

The nature and composition of the English vocabulary, with particular attention to Greek and Latin elements, and its development among diverse cultures and societies; techniques of morphological analysis, allomorphy, derivational morphology, formal and semantic change, and Indo-European etymology.

Offered fall and summer semesters.

CLAS 4010/6010. Archaic Greece. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1020 or HIST 3250 or HIST 4311/6311 or permission of department.

The expanding world of Greek culture in the period from 750 to 480 BC, including consideration of the many new and influential developments in art, literature, history, political science, and philosophy, and their interrelationships.

Not offered on a regular basis.

CLAS 4020/6020. Greek Sanctuaries and Festivals. 3 hours.

Prerequisite: CLAS 1000 or HIST 1110 or HIST 3250 or HIST 4311/6311 or HIST 4312/6312 or permission of department.

The major Greek sanctuaries and their physical remains, and the Greek religious calendar and its important festivals, including the Olympic Games and the Panathanaia.

Not offered on a regular basis.

CLAS 4030/6030. The Archaeology of the Greek Colonies. 3 hours.

Prerequisite: CLAS 1000 or HIST 2301 or HIST 3250 or HIST 4311/6311 or HIST 4312/6312 or ARST 2310 or permission of department.

The archaeology of the Greek colonies in Ionia, Magna Graecia, and the Black Sea area is examined to identify and explain the combination of Greek and indigenous cultures in these areas on the fringes of the Greek world.

Not offered on a regular basis.

CLAS 4040/6040. The Hellenistic World. 3 hours.

Prerequisite: CLAS 1000 or HIST 3250 or HIST 4311/6311 or HIST 4321/6321 or HIST 4322/6322 or permission of department.

Archaeology, art, culture, and history of Greece and the East from the rise of Alexander to Rome's annexation of Egypt.

Not offered on a regular basis.

CLAS 4100/6100. Ancient Cities of Greece and Rome. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or permission of department.

Selected Greek and Roman cities and their architecture; principles upon which they are planned and laid out. Theories of Hippodamus and others, and the writings of Vitruvius. Detailed study of the topography of Athens and Rome. Course may be taken through UGA Studies Abroad program in Rome.

Not offered on a regular basis.

CLAS 4110/6110. The Etruscans and Early Rome. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or permission of department.

The art and culture of the people of Northern Italy known as the Etruscans, with special attention to their relationship with the Greek world and their role in the development of Rome as a city. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4120/6120. Pompeii and Herculaneum: The Buried Cities. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or permission of department.

Pompeii, Herculaneum, and the area destroyed by the eruption of Mt. Vesuvius. Concentration will be on political, social, religious, and economic life, combined with a study of the painting, sculpture, and architecture of the excavated cities and villas. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4130/6130. The Archaeology of Rome's Provinces. 3 hours.

Prerequisite: CLAS 1010 or CLAS(ANTH) 2000 or permission of department.

The archaeology of the Western and/or Eastern provinces of the Roman Empire, concentrating on the major cities and sanctuaries and their physical remains. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4140/6140. Archaeology of Punic and Roman Carthage. 3 hours.

Prerequisite: CLAS 1000 or CLAS(ANTH) 2000 or permission of department.

Corequisite: CLAS 4150/6150.

The civilization of Roman North Africa from the Punic period through the Arab Conquest, using the important city of Carthage as a model. Course may be taken through UGA Studies Abroad program in Carthage.

Non-Traditional Format: Open only to students participating in the University's Carthage excavation.

Offered summer semester.

CLAS 4150/6150. Practicum in Classical Archaeology. 3 hours.

Prerequisite: CLAS 1010 or CLAS (ANTH) 2000 or permission of department.

Corequisite: CLAS 4140/6140.

All aspects of modern field archaeology on a classical site, including excavation techniques, the keeping of field records, and the classification and conservation of finds from the moment of recovery to their final disposition in museums. Course may be taken through UGA Studies Abroad program in Carthage.

Non-Traditional Format: Open only to students participating in the University's Carthage excavation.

Offered on a regular basis.

CLAS 4200/6200. Ancient Comedy. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or CLAS 1020 or permission of department.

Ancient comedy in English translation, concentrating on fifth-century Athens, and tracing its changing focus through Menander to Plautus and Terence; also considered will be the theoretical basis of comedy as discussed by Aristotle and others, as well as the place of comedy within the history of genres.

Not offered on a regular basis.

CLAS 4210/6210. Ancient Tragedy. 3 hours.

Prerequisite: Permission of department.

The conventions of classical tragedy as exemplified in the plays (in English translation) of the Greek dramatists Aeschylus, Sophocles, and Euripides, as well as the Roman tragedian Seneca.

Not offered on a regular basis.

CLAS 4220/6220. Roman Epic Poetry. 3 hours.

Prerequisite: CLAS 1010 or HIST 3250 or HIST 4321/6321 or HIST 4322/6322 or permission of department.

The epic poetry of ancient Rome with special emphasis on Ennius, Vergil, and Lucan. The historical background of epic will be examined and the poems will be read in English translation, some attention being given to Renaissance and modern translations. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4230/6230. Classical Rhetoric. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or SPCM 1100.

Classical rhetoric, with special attention to Plato, Aristotle, and Cicero. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4240/6240. Theory and Analysis of Classical Mythology. 3 hours.

Prerequisite: CLAS 1000 or CLAS 1010 or CLAS 1020 or permission of department.

The interpretation and analysis of ancient myths, particularly those of Greece and Rome.

Not offered on a regular basis.

CLAS 4300/6300. Selected Topics in Ancient Civilization. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: CLAS 1000 or CLAS 1010 or permission of department.

Special topics in the civilization of Greece and Rome.

Topics will vary as demand requires. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Not offered on a regular basis.

CLAS 4310. Directed Readings in Classical Culture. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Individual study, reading, or projects under the direction of a faculty project director. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

(CLAS)LING 4610/6610. Sanskrit I. 3 hours.

Prerequisite: LING 2100 or ENGL (LING) 3030 or permission of department.

The phonology, morphology, and syntax of the classical Sanskrit language, emphasizing the position of Sanskrit within the Indo-European language family and its importance for Indo-European linguistics.

Offered every odd-numbered year on a regular basis.

(CLAS)LING 4620/6620. Sanskrit II. 3 hours.

Prerequisite: LING (CLAS) 4610/6610.

Continued studies in both the synchronic and diachronic grammar of classical Sanskrit.

Offered every odd-numbered year on a regular basis.

CLAS 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the supervision of a project director. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CLAS 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the supervision of a project director. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CLAS 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the supervision of a project director. Course may be taken through UGA Studies Abroad program in Classics in Rome.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CLAS 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field or a closely related field.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall, spring, and summer semesters.

(CMLT) Comparative Literature

College of Arts and Sciences, Department of Comparative Literature

(CMLT)(ANTH)GEOG(HIST)(SOCT) 2100. Introduction to Africa. 3 hours.

The history, physical environment (landforms, vegetation, and climate), and sociocultural environment (artistic, political, and social development) of Africa.

Offered fall semester.

CMLT 2111. World Literature I. 3 hours.

Prerequisite: ENGL 1102.

World literature from antiquity to the seventeenth century.

Offered fall and spring semesters.

CMLT 2210. Western World Literature I. 3 hours.

Prerequisite: ENGL 1102.

Western World Literature from Homer to the twentieth century.

Offered fall, spring, and summer semesters.

CMLT 2212. World Literature II. 3 hours.

World literature from the seventeenth century to the present.

Offered fall and spring semesters.

CMLT 2220. Western World Literature II. 3 hours.

Prerequisite: ENGL 1102.

Western World Literature from Homer to the twentieth century.

Offered fall, spring, and summer semesters.

CMLT 2250H. Western World Literature I (Honors). 3 hours.

Not open to students with credit in CMLT 2210.

Prerequisite: ENGL 1102 and permission of Honors.

Western World Literature from Homer to the twentieth century.

Offered fall and spring semesters.

CMLT 2260H. Western World Literature II (Honors). 3 hours.

Not open to students with credit in CMLT 2220.

Prerequisite: ENGL 1102 and permission of Honors.

Western World Literature from Homer to the twentieth century.

Offered fall and spring semesters.

CMLT 2270H. World Literature I (Honors). 3 hours.

Prerequisite: ENGL 1102 and permission of Honors.

World literature from antiquity to the seventeenth century.

Not offered on a regular basis.

CMLT 2280H. World Literature II (Honors). 3 hours.

Prerequisite: ENGL 1102 and permission of Honors.

World literature from the seventeenth century to present.

Not offered on a regular basis.

CMLT 2400. Asian-American Literature. 3 hours.

Works of literature by Asian-American writers, including works written in English and translations of works originally written in Asian languages.

Offered fall and spring semesters.

CMLT 2410H. Asian-American Literature (Honors). 3 hours.

Prerequisite: Permission of Honors.

Works of literature by Asian-American writers, including works written in English and translation of works originally written in Asian languages.

Not offered on a regular basis.

CMLT 3100. Speculative Fiction. 3 hours.

Prerequisite: ENGL 1102.

Historical and thematic treatment of fictional speculation about scientific matters from the dialogues of Plato to the contemporary science fiction of Vonnegut.

Offered every even-numbered year on a regular basis.

CMLT 3110. Literature of the Self. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ENGL 1102.

Comparative study of the self as presented in literature of the first person (such as lyric poetry and autobiography) with particular emphasis on questions of genre, rhetoric, and poetics.

Not offered on a regular basis.

CMLT 3140. Women Writers. 3 hours.

Prerequisite: ENGL 1102.

World literature represented by women writers from the seventh century B.C. through the seventeenth century A.D.

Not offered on a regular basis.

CMLT 3150. Introduction to Modern African Literature. 3 hours.

Prerequisite: ENGL 1102.

The literature of twentieth-century Africa in translation with emphasis on the African novel.

Offered every year on a regular basis.

CMLT 3160. Myth and Oral Tradition. 3 hours.

Prerequisite: ENGL 1102.

A discussion of twentieth-century literary works (emphasis on narrative and drama) dealing with the reinterpretation of ancient classical myths, inclusive of English, American, Italian, French, German, and Russian Literatures.

Offered every year on a regular basis.

CMLT 3170. Detective Fiction. 3 hours.

Prerequisite: ENGL 1102.

The evolution of the mystery story in the United States, England, and Europe, based on readings from such masters of the genre as Poe, Doyle, Christie, Simenon, Hammett, Chandler, et al. All readings in English.

Offered every year on a regular basis.

CMLT (ANTH) 3180. Introduction to East Asian Cultures. 3 hours.

Cultures of China, Japan, Korea, and Vietnam, with emphasis on the formation of Chinese culture and its diffusion and variation within the other national groups.

Not offered on a regular basis.

CMLT 3200. Contemporary Literature. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: ENGL 1102.

Selected works of contemporary world literature, with emphasis on works from Eastern Europe, the Middle East, Asia, Africa, and Latin America.

Not offered on a regular basis.

CMLT 3250. Children's Literature. 3 hours.

Prerequisite: Permission of department.

Selected works written for children from antiquity to the nineteenth century. Special emphasis on historical, cultural, religious, social, and linguistic contexts.

Not offered on a regular basis.

CMLT 3990. Directed Study in Comparative Literature. 3 hours.

Prerequisite: Permission of department.

Independent study and research under the direction of individual faculty members.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CMLT 4010. Approaches in Comparative Literature. 3 hours.

Prerequisite: Permission of department.

The methods and literary theories encompassed by the discipline of Comparative Literature.

Offered fall semester.

CMLT 4020. Senior Seminar in Comparative Literature. 3 hours.

The capstone course for the undergraduate major in comparative literature, focusing on a particular theme, methodology, theory or problem.

Offered spring semester.

CMLT 4050/6050. Literature and Ideas of Nature. 3 hours. Repeatable for maximum 6 hours credit.

Literary and philosophical texts of various historical periods that trace changes in how human beings understand their non-human environment.

Not offered on a regular basis.

CMLT 4070/6070. Renaissance European Literature. 3 hours.

Literature of Western Europe (Italian, French, Spanish, Germanic, and English) 1450-1600, with emphasis on literary types and prevailing ideas.

Not offered on a regular basis.

CMLT 4080/6080. Romantic European Literature. 3 hours.

The rise and development of Romanticism in the eighteenth and nineteenth centuries, with reading of selected literature and criticism.

Not offered on a regular basis.

CMLT 4090/6090. Poetry. 3 hours.

Lyric poetry from the mid-nineteenth century to the present.

Not offered on a regular basis.

CMLT 4100/6100. Mannerist and Baroque Literature. 3 hours.

Literary forms and issues in Europe ca. 1550-1700, with special attention to the intellectual background and the interrelationships between literature and other arts and sciences.

Not offered on a regular basis.

CMLT 4110/6110. Medieval European Literature. 3 hours.

The literatures of medieval Europe with emphasis on major literary genres and the philosophical and social presuppositions which inform them.

Not offered on a regular basis.

CMLT 4120/6120. Eighteenth-Century European Literature. 3 hours.

The literature of England, France, and Germany in the eighteenth century, with emphasis on literary types and prevailing ideas.

Not offered on a regular basis.

CMLT 4150/6150. The Novel. 3 hours.

The novel as a genre. Origins of prose fiction, theory of the novel, and representative readings of novels from the sixteenth through the twentieth centuries will be included.

Not offered on a regular basis.

CMLT 4200/6200. Literature and the Visual Arts. 3 hours.

Formal, philosophical, and thematic relationships between literature and one or more of the visual arts in a given period.

Not offered on a regular basis.

CMLT 4210/6210. Literature and Cinema. 3 hours.
Repeatable for maximum 6 hours credit.
Formal, philosophical, and thematic relationships between literature and cinema.
Offered every even-numbered year on a regular basis.

CMLT 4250/6250. Drama. 3 hours.
Drama as a genre from its beginnings to the present.
Offered every year on a regular basis.

CMLT 4300/6300. Modernism and Post-modernism. 3 hours.
Modernism and postmodernism as literary movements, with reading of selected literature and criticism.
Not offered on a regular basis.

CMLT 4350/6350. Nineteenth-Century Literature. 3 hours.
Readings in major writers and works of nineteenth-century European and world literature.
Not offered on a regular basis.

CMLT 4400/6400. East Central European Literature and Culture. 3 hours.
The works of major modern East Central European writers, with some attention to representative cinema.
Offered every even-numbered year on a regular basis.

CMLT 4510/6510. Literature and Music. 3 hours.
The forms, relationships, and aesthetics of music and literature.
Not offered on a regular basis.

CMLT 4600/6600. Survey of East Asian Literature I. 3 hours.
Poetry, prose, and drama in traditional China and Japan. The works will be in English translation.
Offered every year on a regular basis.

CMLT 4610/6610. Survey of East Asian Literature II. 3 hours.
Poetry, prose, and drama in China and Japan from the nineteenth and twentieth centuries. The works will be in English translation.
Offered every year on a regular basis.

CMLT 4620/6620. East Asian Novel. 3 hours.
The major/minor novelists and their works, especially those of the nineteenth and twentieth centuries. The novels are in English translation.
Offered every year on a regular basis.

(CMLT)LING 4870/6870. Language, Gender, and Culture. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
The role of language and culture in the formation of philosophical assumptions about gender differentiation in society.
Offered every year on a regular basis.

CMLT 4880/6880. Survey of African Literature I. 3 hours.
African literature from its ancient oral traditions to the European colonial period based on works of African authors written in English and English translations of the African works.
Not offered on a regular basis.

CMLT 4890/6890. Survey of African Literature II. 3 hours.
African literature since the independence of the African people from European colonial rule.
Not offered on a regular basis.

CMLT 4970H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the direction of a project director.
Not offered on a regular basis.

CMLT 4980H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Not offered on a regular basis.

CMLT 4990H. Honors Thesis. 3 hours.
Prerequisite: Permission of Honors.
Individual research in the major field or in a closely related field under the guidance of a project director.
Not offered on a regular basis.

(CMSD) Communication Sciences and Disorders

College of Education, Department of Communication Sciences and Disorders

CMSD 4000. Special Problems in Communication Sciences and Disorders. 1-6 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Permission of department.
Adaptation of the Communication Sciences and Disorders curriculum to meet students' individual needs: supervised or directed reading, research, or clinical experiences.

Non-Traditional Format: Students work independently under the direction of a faculty member. Meetings between students and supervising faculty are arranged independently.
Offered on a regular basis.

CMSD 4090/6090. Introduction to Phonetics. 2 hours.
One lecture and one 1-hour lab period.
Prerequisite: Permission of department.
Identification, discrimination, and IPA transcription of segmental and supra-segmental elements of American English. Emphasis on branches of phonetics; classifi-

cation schemes; narrow transcription of variants associated with regional dialects, speech disorders, and non-native pronunciations; dialects as manifestations of cultural diversity.

Offered fall semester.

CMSD(LING) 4120/6120. Anatomy and Physiology of Speech, Voice, and Hearing. 3 hours.

Prerequisite: Permission of department.

Anatomical structures and basic physiological functions underlying audition, respiration, phonation, articulation, resonance, and swallowing.

Offered fall semester.

CMSD 4130/6130. Language Science. 3 hours.

Prerequisite: Permission of department.

Components and structures of language, including analysis of sentences. Language variation and bilingualism.

Offered on a regular basis.

CMSD(LING) 4140/6140. Introduction to Speech and Voice Science. 3 hours.

Prerequisite: CMSD 4090/6090 and CMSD(LING) 4120/6120 and PSYC 1101 and (MATH 1101 or PHYS 1010 or permission of department).

Application of basic physical principles to production and perception of speech and voice. Biomechanics of vocal fold oscillation; acoustics of voice source; resonance; acoustic phonetics; psychoacoustics of speech and voice. Interpretation of objective measures and outputs of computational models.

Offered spring semester.

CMSD 4150/6150. Hearing Science. 3 hours.

Prerequisite: CMSD(LING) 4120/6120 or permission of department.

Physics of sound and the physiological and psychological bases of auditory function.

Offered fall semester.

CMSD 4160/6160. Intermediate Speech and Voice Science: Clinical Applications. 3 hours.

Prerequisite: (CMSD(LING) 4140/6140 and CMSD 4150/6150 and CMSD 4530 and CMSD 6600) or permission of department.

Application of recent theory and objective measurement techniques to assessment and intervention in speech pathology. Readings include research articles in the "sciences" of speech and voice. Informal laboratory demonstrations and hands-on activities as class size permits. Designed for beginning master's level speech-language pathology majors on a non-thesis track.

Offered on a regular basis.

CMSD(LING) 4500/6500. Study of Language Development. 3 hours.

Prerequisite: CMSD 4130/6130 or permission of department.

Normal development of children's reception, integra-

tion, and expression of linguistic information; cultural, gender, socioeconomic, cognitive, and prelinguistic influences on language development.

Offered on a regular basis.

CMSD 4520. Language Disorders of Children. 3 hours.

Prerequisite: CMSD(LING) 4500/6500 or permission of department.

Etiology and pragmatic, semantic, syntactic, and morphologic characteristics of children's language disorders; emphasis on various exceptional populations. Field observations and analyses of children with language disorders.

Offered on a regular basis.

CMSD 4530. Speech Disorders. 3 hours.

Prerequisite: CMSD(LING) 4140/6140 or permission of department.

Etiology and characteristics of articulation, phonological, voice, fluency, and acquired motor speech disorders. Field observations of children or adults with speech disorders.

Offered on a regular basis.

CMSD 4710. Introduction to Audiology. 3 hours.

Prerequisite: (CMSD(LING) 4120/6120 and CMSD 4150/6150) or permission of department.

Applying the basic physics of sound to the measurement of hearing; introduction to the pathologies of hearing; hearing loss associated with pathologies; medical and/or rehabilitation strategies.

Offered on a regular basis.

CMSD 4730/6730. Psychosocial Characteristics of Deafness. 3 hours.

Prerequisite: CMSD 4710 or permission of department.

Development, adjustment, and educational needs of deaf individuals. Cognitive, personality, and socioemotional development; aptitudes, special abilities, and cultural perspectives.

Offered on a regular basis.

CMSD 4810/6810. Basic Sign Language. 3 hours.

Prerequisite: Permission of department.

History and description of sign language systems. Practice in expressive and receptive use of sign language and finger spelling.

Offered on a regular basis.

CMSD 5000. Basic Clinical Procedures in Communication Sciences and Disorders. 1 hour. One lecture and two 2-hour lab periods.

Prerequisite: (CMSD 4520 and CMSD 4530) or permission of department.

Principles of professional clinical practice: following administrative case procedures, writing clinical reports, developing treatment plans. Assigned observations in the University of Georgia Speech and Hearing Clinic.

Offered on a regular basis.

CMSD 5790/7790. Rehabilitative Audiology. 3 hours.
Prerequisite: CMSD 4710 and permission of department.

Theories and procedures used in the rehabilitation of children and adults with hearing loss.

Offered on a regular basis.

(CRSS) Crop and Soil Sciences

College of Agricultural and Environmental Sciences, Department of Crop and Soil Sciences

CRSS 2010-2010L. Introduction to Crops. 4 hours.
Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L or BTNY 1220-1220L.

Crop species and world centers of production; origin of crops, their uses and climatological requirements for growth, classification, morphology, reproduction, growth, and improvement.

Offered fall semester.

CRSS 2830. Introduction to Turfgrass Management. 1 hour.

Turfgrasses and their management. Emphasis will be placed on how turfgrasses are used in society. Guest speakers from the turfgrass industry (golf course, sports fields, lawn care, etc.) who will discuss management systems and career opportunities.

Offered every year on a regular basis.

CRSS 3050-3050L. Principles of Soil Science. 4 hours.
Three lectures and one 2-hour lab period.

Not open to students with credit in CRSS(FORS) 3060-3060L.

Prerequisite: CHEM 1212 and CHEM 1212L.

Soil formation; physical, chemical, and biological properties of soils; commercial fertilizers, lime, and organic matter; and soil management practices.

Offered every year on a regular basis.

CRSS(FORS) 3060-3060L. Soils and Hydrology. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in CRSS 3050-3050L.

Prerequisite: CHEM 1212 and CHEM 1212L.

Soil formation and morphology, physical and chemical properties, soil-water interactions, hydrologic processes and water balance in the landscape, and soil and water quality. Emphasis on landscape management of soil and water resources for both productivity and environmental quality.

Offered every year on a regular basis.

CRSS 3270-3270L. Principles of Turfgrass Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1107-1107L or BTNY 1210-1210L.

Turfgrass management practices and systems. Species selection, establishment, irrigation, mowing, fertilization, cultivation, as well as weed, insect, and disease

control. Discussions will include the benefits of turfgrasses to society and various environmental issues impacting the turfgrass industry.

Offered every year on a regular basis.

CRSS 3300. Physiology of Crop Growth and Development. 3 hours.

Prerequisite: CRSS 2010-2010L or permission of department.

Physiological development of crops from seed metabolism through fruit ripening. Growth of crop communities and physiological changes that occur as a result of abiotic stress.

Offered every year on a regular basis.

CRSS(ENTO)(PATH) 3500. Turfgrass Pest Management. 3 hours.

Prerequisite: CRSS 2830 or CRSS 3500-3270L.

Identification and control of turfgrass weeds, insects, and diseases. Emphasis will be placed on management strategies that include both chemical and non-chemical approaches to the prevention and control of common turfgrass pests.

Offered every year on a regular basis.

CRSS 3910. Crop and Soil Science Internship. 1-3 hours.

Prerequisite: Permission of department.

Provides experiences which include pastures and turf, plant breeding and genetics, weed science, soil chemistry and fertility, soil physics, soil biology, soil conservation and morphology.

Non-Traditional Format: This course provides students credit for internship experience. The credit hours available are variable contingent on the intensity of the internship experience.

Offered fall, spring, and summer semesters.

CRSS 3990. Special Problems in Crop and Soil Sciences. 1-3 hours.

Research on problems in crop, soil, or turfgrass management area to be conducted in laboratory, field or library; report required, directed by crop and soil science staff.

Non-Traditional Format: This course will provide student credit for conducting a research problem under the direction of a faculty member in Crop and Soil Sciences. Credit is variable dependent upon the scope of the research project.

Offered fall, spring, and summer semesters.

CRSS 4040/6040. Plant Breeding. 3 hours.

Prerequisite: PGEN 3580-3580L or permission of major.

Fundamental principles and theories utilized in the science of plant breeding and cultivar development and the role breeding plays in crop improvement.

Offered every year on a regular basis.

CRSS 4090. Advanced Turfgrass Science. 2 hours.

Prerequisite: CRSS 2830 or CRSS 3500-3270L or permission of major.

The effects of the environment on turfgrass growth and

quality management strategies for overcoming high and low temperature stress, as well as light and water deficits. Other topics include soil modification, golf green construction, developing fertilization programs, and discussions of various pesticide/environmental issues.

Offered every year on a regular basis.

CRSS 4220/6220. Topics in Crop and Soil Sciences. 1-3 hours. Repeatable for maximum 12 hours credit.

Topics and methods in Crop and Soil Sciences with a different timely topic each semester, including new areas of inquiry in crop and soil sciences.

Non-Traditional Format: This course provides students with exposure to evolving areas of crop and soil sciences. Credit hours are variable based upon topic covered in a particular semester.

Offered fall, spring, and summer semesters.

(CRSS)ENTO 4250/6250-4250L/6250L. Pesticide Management and Utilization. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L and [(CHEM 2100 and CHEM 2100L) or (CHEM 2211 and CHEM 2211L)].

Practical management and utilization of pesticides in urban and agricultural environments. Subject areas include classification of insecticides, herbicides, and fungicides, etc., their general chemical and toxicological properties, deployment philosophy, hazards and environmental impact, formulation and application, safety and disposal, and management of pesticide resistance. Offered spring semester.

CRSS 4260/6260. Forage Management and Utilization. 3 hours.

Prerequisite: CRSS 2010-2010L or permission of department.

Characteristics of forage species; establishment, physiology, and morphology effects on management; forage quality and utilization by livestock; grazing management; hay and silage; forages for wildlife and conservation.

Offered every year on a regular basis.

CRSS 4270. Crop and Soil Science Seminar. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Junior standing or senior standing.

Seminar in topics related to crops and soils. Participation required for credit.

Offered fall and spring semesters.

CRSS 4300/6300. Crop Production and Management. 3 hours.

Prerequisite: (CRSS 3050-3050L and CRSS 3300) or permission of department.

Conventional and alternative crop management systems, principles, and practices of crop science are used in discussion of management problems related to agronomic crops grown in Georgia.

Offered every year on a regular basis.

CRSS 4340/6340-4340L/6340L. Weed Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (BIOL 1107-1107L and CHEM 1211 and CHEM 1211L) or permission of department.

Fundamentals of weed biology; cultural and chemical weed control; properties and uses of herbicides and herbicide application equipment; and current systems for weed management in cropping programs.

Offered fall semester.

CRSS 4370/6370. Heavy Metals in the Environment. 1 hour.

Prerequisite: [CHEM 1212 and CHEM 1212L and (CRSS 3050-3050L or CRSS (FORS) 3060-3060L)] or permission of major.

The natural level and sources of, and human activity affecting, the heavy metal composition of soils and plants, and their potential hazards to plant life and introduction into the food chain.

Offered on a regular basis.

CRSS 4400/6400. Crop Ecology. 3 hours.

Prerequisite: CRSS 2010-2010L or BTNY 1210-1210L or permission of major.

World population growth and food production problems; origin, distribution, and adaptation of tropical, subtropical, and temperate crop plants as influenced by environment with emphasis on climatic factors.

Offered every year on a regular basis.

(CRSS)(BIOL)BTNY 4500/6500. Introduction to Gene Technology. 3 hours.

Prerequisite: GENE(BIOL) 3204.

Methods and applications of gene technology (recombinant DNA) and related concepts in molecular biology. These will include structure and synthesis of macromolecules; cDNA and genomic cloning, polymerase chain reaction; molecular markers and mapping; gene isolation strategies; and various host-vector systems.

Offered every year on a regular basis.

CRSS 4510. Contaminants in Soils. 3 hours.

Prerequisite: [CRSS 4600/6600-4600L/6600L and CRSS (MIBO) 4610/6610-4610L/6610L and CRSS 4670/6670] or permission of major.

Fate and transport of contaminants; monitoring and remediation of pollution; sources, extent, and characteristics of pollution; risk assessment and management.

Offered every year on a regular basis.

CRSS 4520/6520. Field Soil and Site Assessment. 3 hours.

Prerequisite: (CRSS 4540/6540-4540L/6540L and CRSS 4600/6600-4600L/6600L) or permission of department.

How to assess a site to determine if the soil places any limitations on land use. Topics covered include soil sampling, soil landscapes, wetland and hydric soils, septic systems, and land application of waste.

Offered every year on a regular basis.

CRSS 4540/6540-4540L/6540L. Pedology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L or permission of department.

Soils as a natural component of the ecosystem, including morphology, landscape distribution, formation, identification of diagnostic horizons and features, and classification.

Non-Traditional Format: A one-day trip to North Georgia and a two-day trip to the Coastal Plain will be required at student's expense.

Offered every year on a regular basis.

CRSS 4590/6590-4590L/6590L. Soil Fertility. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS(FORS)3060-3060L or permission of major.

Soil conditions affecting availability of plant nutrients; methods of determining soil fertility and insufficiency of plant nutrients in soils, and interpretation of chemical and biological measurements as related to fertility maintenance and good soil management.

Offered spring semester.

CRSS 4600/6600-4600L/6600L. Soil Physics. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: [(CRSS 3050-3050L or CRSS(FORS) 3060-3060L) and MATH 2200, 2200L and (PHYS 1111-1111L or PHYS 1211-1211L)] or permission of major.

Physical properties and process of soils. Water, heat, and solute movement in soils.

Offered every year on a regular basis.

CRSS(MIBO) 4610/6610-4610L/6610L. Soil Microbiology. 3 hours. One lecture and two 2-hour lab periods.

Microorganisms in soil and their effect on nutrient recycling, especially as it relates to environmental quality and crop production.

Offered every year on a regular basis.

CRSS 4660/6660-4660L/6660L. Chemical Analysis of Environmental Samples. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CHEM 2300 and CHEM 2300L.

Analysis of soils, sediment, rocks, water for important organic and inorganic contaminants. Chromatography, atomic adsorption, and plasma emission spectroscopy, field sampling and measurements. Quality assurance/quality control, data reporting, computer use in analysis.

Offered every year on a regular basis.

CRSS 4670/6670. Environmental Soil Chemistry. 3 hours.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L or permission of department.

Environmental soil chemistry applies and extends the concepts of chemistry and physics to the investigation of problems related to the physical, chemical, and biological characteristics of soil and their importance in

relation to the management of contaminants, pesticides, and production inputs.

Offered fall semester.

(CSCI) Computer Science

College of Arts and Sciences, Department of Computer Science

CSCI 1100-1100L. Introduction to Personal Computing. 3 hours. Two lectures and two 1-hour lab periods.

Computer technology as currently used in universities, businesses and homes. This course covers fundamental hardware, software, and networking concepts, plus the social, economic, and legal impact of information systems. Hands-on lab exercises cover advanced document preparation, mathematical modeling, and multimedia. Networks and the internet are emphasized throughout.

Offered fall, spring, and summer semesters.

CSCI 1210. Introduction to Computational Science. 3 hours.

The use of computer models of scientific systems with examples from physical, social, medical, biological, economic, and ecological systems.

Offered fall semester.

CSCI 1301-1301L. Introduction to Computing and Programming. 4 hours. Three lectures and two 1-hour lab periods.

Prerequisite: MATH 1113.

Algorithms, programs, and computing systems. Fundamental techniques of program development and supportive software tools. Programming projects and applications in a structured computer language. Hands-on experience using microcomputers.

Offered fall, spring, and summer semesters.

CSCI 1302. Software Development. 4 hours.

Prerequisite: CSCI 1301-1301L.

Software development techniques in an object-oriented computer language. An intermediate programming course emphasizing systems methods, top-down design, testing, modularity, and structured techniques. Applications from areas of numeric and non-numeric processing and data structures.

Offered fall and spring semesters.

CSCI 1710-1710L. Introduction to Computer Science and Computer Systems. 4 hours. Three lectures and two 1-hour lab periods.

Prerequisite: CSCI 1301-1301L.

The basics of computer hardware and systems from the viewpoint of a potential computer science major. The associated laboratory uses the personal computer as a case study for computer architecture and operating systems. Students study and become familiar with the machine and its operating system by writing programs

in a low-level (assembler) language.

Offered spring semester; offered summer semester even-numbered year.

(CSCI)WMST 2040-2040L. Gender and Computing: Information Systems Design. 3 hours. Two lectures and one 2-hour lab period.

Computers and the internet as tools of knowledge to empower the user. Issues raised will be from gender and technology literature. Laboratory sessions will provide hands-on experience with information systems design and computer programming culminating in the creation of a community-based information system.

Offered fall semester.

CSCI(MATH) 2610. Discrete Mathematics for Computer Science. 4 hours.

Prerequisite: CSCI 1301-1301L.

The fundamental mathematical tools used in computer science: sets, relations, and functions; propositional logic, predicate logic, and inductive proofs; summations, recurrences, and elementary asymptotics; counting and discrete probability; undirected and directed graphs; introductory linear algebra, with applications in computer science.

Offered spring semester.

CSCI 2670. Introduction to Theory of Computing. 4 hours.

Prerequisite: CSCI(MATH) 2610.

The theory of computing, including finite automata, regular expressions and languages, context-free grammars and languages, push-down automata, pumping lemmas, the Chomsky hierarchy of language classes, Turing machines and computability, undecidability of the halting problem, reducibilities among decision problems and languages, time and space complexity, and NP-completeness and tractability.

Offered fall and spring semesters.

CSCI 2720. Data Structures. 4 hours.

Prerequisite: CSCI 1302 and CSCI(MATH) 2610.

The design, analysis, implementation, and evaluation of the fundamental structures for representing and manipulating data: lists, arrays, trees, tables, heaps, graphs, and their memory management.

Offered fall and spring semesters.

CSCI 4050/6050. Software Engineering. 4 hours.

Prerequisite: CSCI 2720.

Full cycle of a software system development effort, including requirements definition, system analysis, design, implementation, and testing. Special emphasis is placed on system analysis and design. The design phase includes development of a user interface. A large term project incorporates the full software life cycle.

Offered fall semester.

CSCI 4140/6140. Numerical Methods and Computing. 4 hours.

Prerequisite: CSCI 1302 and MATH 2210, 2210L.

Prerequisite or corequisite: MATH 3000.

Numerical methods and computing. Topics include: computer arithmetic; numerical solutions of nonlinear equations; polynomial interpolation; numerical differentiation and integration; numerical solutions of systems of linear equations, initial and boundary value problems, systems of ordinary differential equations, spline functions, and the method of least squares.

Offered spring semester.

CSCI 4210/6210. Simulation and Modeling. 4 hours.

Prerequisite: CSCI 2720.

The modeling and simulation of existing or planned systems for the purpose of studying their correctness, reliability, or performance. Topics to be addressed include discrete-event simulation, continuous simulation, analysis and modeling methodologies, animation, virtual reality, and Web-based simulation.

Offered spring semester.

CSCI 4350/6350. Global Information Systems. 4 hours.

Prerequisite: CSCI 4370/6370 or CSCI 4570/6570.

Provides intermediate to advanced understanding of the use of Internet, World Wide Web, and network computing (including Java) technologies for management (search, access, integration, presentation) of multimedia information. Topics discussed include key techniques, tools and technologies for creating such systems, developing novel applications, and their impact on business.

Offered spring semester.

CSCI 4370/6370. Database Management. 4 hours.

Prerequisite: CSCI 2720.

The theory and practice of database management. Topics to be covered include efficient file access techniques, the relational data model as well as other data models, query languages, database design using entity-relationship diagrams and normalization theory, query optimization, and transaction processing.

Offered fall and spring semesters.

CSCI 4470/6470. Algorithms. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.

Algorithms, covering basic analysis techniques, basic design techniques (divide-and-conquer, dynamic programming, greedy, and branch-and-bound), basic graph algorithms, and NP-completeness.

Offered fall semester.

CSCI 4490/6490. Algorithms for Computational Biology. 4 hours.

Prerequisite: CSCI 4470/6470 or permission of department.

Application of discrete algorithms to computational problems in molecular biology. Topics are drawn from

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such areas as classical sequence comparison, multiple sequence alignment, DNA sequence assembly, DNA physical mapping, genome rearrangement, evolutionary tree construction, and protein folding. Background in molecular biology is not required.

Offered spring semester of odd-numbered years.

CSCI4500/6500. Programming Languages. 4 hours.

Prerequisite: CSCI 1302.

Prerequisite or corequisite: CSCI 2720.

Several modern programming languages and the paradigm — procedural programming, object-oriented programming, functional programming, and logic programming — that each strives to accommodate. Projects involve at least three languages.

Offered spring semester of even-numbered years.

CSCI4520/6520. Functional Programming. 4 hours.

Prerequisite: CSCI 2720 and CSCI(MATH) 2610.

The functional programming paradigm: functions and types, type inference and polymorphism, higher order functions and recursion, evaluation strategies, abstract data types and modules, lists, trees, and lazy data structures, reasoning about functional programs.

Offered spring semester of even-numbered years.

CSCI(ARTI) 4540/6540. Symbolic Programming. 3 hours.

Prerequisite: CSCI 1302 or permission of department.

Prerequisite or corequisite: CSCI(PHIL) 4550/6550.

Programming in LISP and PROLOG, with emphasis on artificial intelligence techniques. Other languages used for artificial intelligence work will be presented more briefly.

Offered fall semester.

CSCI (PHIL) 4550/6550. Artificial Intelligence. 3 hours.

Prerequisite: CSCI 1302 or [PHIL 2500 and (PHIL 3010 or PHIL 3020 or PHIL 3610)] or permission of department.

Prerequisite or corequisite: CSCI(ARTI) 4540/6540.

The artificial intelligence approach to modeling cognitive processes. Topics include an introduction to heuristic methods, problem representation and search methods, classic AI techniques, and a review of the controversial issues of the AI paradigm of cognition as computation.

Offered fall semester.

CSCI 4570/6570. Compilers. 4 hours.

Prerequisite: CSCI 4720/6720.

Design and implementation of compilers for high-level programming languages. Topics include all phases of a typical compiler, including scanning, parsing, semantic analysis, intermediate code generation, code optimization, and code generation. Students design and develop a compiler for a small programming language. Emphasis is placed on using compiler development tools.

Offered fall and spring semesters.

(CSCI)MATH 4630/6630. Mathematical Analysis of Computer Algorithms. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH)2610).

Discrete algorithms (number-theoretic, graph-theoretic, combinatorial, and algebraic) with an emphasis on techniques for their mathematical analysis.

Not offered on a regular basis.

(CSCI)MATH 4670/6670. Combinatorics. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH)2610).

Basic counting principles: permutations, combinations, probability, occupancy problems, and binomial coefficients. More sophisticated methods include generating functions, recurrence relations, inclusion/exclusion principle, and the pigeonhole principle. Additional topics include asymptotic enumeration, Polya counting theory, combinatorial designs, coding theory, and combinatorial optimization.

Offered every year on a regular basis.

(CSCI)MATH 4690/6690. Graph Theory. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH)2610).

Elementary theory of graphs and digraphs. Topics include connectivity, reconstruction, trees, Euler's problem, hamiltonicity, network flows, planarity, node and edge colorings, tournaments, matchings, and extremal graphs. A number of algorithms and applications are included.

Offered every year on a regular basis.

CSCI 4720/6720. Computer Architecture and Organization. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.

Structure and function of modern computing systems. Topics studied include combinational and sequential logic, number systems and computer arithmetic, hardware design and organization of CPU, I/O systems and memory systems, instruction set and assembly language design, and current trends and developments in computer architecture and organization.

Offered fall and spring semesters.

CSCI 4730/6730. Operating Systems. 4 hours.

Prerequisite: CSCI 4720/6720.

Coverage of the key concepts in modern operating systems. Specific topics include process management, synchronization mechanisms, scheduling strategies, deadlock detection/avoidance, memory management, file systems, protection and security, and distributed systems. Concepts will be reinforced through programming projects using a realistic operating system.

Offered fall and spring semesters.

CSCI 4760/6760. Computer Networks: Technology and Applications. 4 hours.

Prerequisite: CSCI 2720 and CSCI 2670.

In-depth coverage of computer networks, including: digital data transmission and encoding, layered proto-

col models, Internet protocol, Internet client-server software, and network design methodology. Topics also include discussion of recent network technologies, legal, corporate and public-interest aspects and case studies involving public and private enterprises. Offered spring semester.

CSCI4810/6810. Computer Graphics. 4 hours.

Prerequisite: CSCI2720 and CSCI2670.

Principles of two-dimensional and three-dimensional interactive raster graphics. Principles of scan conversion algorithms for two-dimensional and three-dimensional graphics primitives; data structures and modeling techniques for raster graphics; interaction, visual realism, animation and user interface design; ray tracing, illumination, shading, data storage/retrieval, software engineering and parallel computing for graphics. Offered spring semester.

CSCI4900/6900. Special Topics in Computer Science. 1-4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Various advanced topics in Computer Science.

Not offered on a regular basis.

CSCI4950/6950. Directed Study in Computer Science. 1-4 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Content will vary in response to the interests, needs, and capability of the students and faculty involved. Individual, guided study in computer science.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

CSCI5080/7080-5080L/7080L. Personal Computer System Administration. 4 hours. Three lectures and two 1-hour lab periods.

Prerequisite: CSCI1101-1101L.

Management of Windows and Macintosh computer systems. Topics covered include configuration, backups, hardware and software troubleshooting, and setting up for Internet access. Hands-on laboratory emphasized.

Offered summer semester.

(DANC) Dance Education

College of Education, Department of Dance Education

DANC1250. Performance Company I. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods. Participation as a dancer in a faculty-choreographed dance piece.

Offered fall and spring semesters.

DANC1650. Modern Dance Foundations I. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Foundation training necessary for the development of

skill proficiency in modern dance.

Offered fall and spring semesters.

DANC1660. Ballet Foundations I. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Designed to build the strength, flexibility, endurance, and control necessary for performance of low beginning-level ballet barre exercises, adagio sequences, and allegro enchainments. An understanding of proper body mechanics and the French vocabulary for ballet will also be emphasized.

Offered fall and spring semesters.

DANC2010. Dance Appreciation. 3 hours.

All aspects of the dance experience, exploring related roles of the dancer, choreographer and spectator. Historical and critical readings and illustrated lectures will acquaint the student with masterpieces of dance theatre art and develop the student's responsiveness to dance. Offered fall semester.

DANC2020. Laban Movement/Rhythmic Analysis. 2 hours. One lecture and two 1-hour lab periods.

Practical exercises within a theoretical approach to efficient movement based on Bartenieff Fundamentals TM, Pilates TM training, and yoga. Emphasis will be placed upon neuromuscular repatterning, strengthening exercises, proper stretching techniques, dynamic alignment, and kinesthetic awareness. Fundamentals of rhythm, musical form and movement notation relevant to the needs of the dance educator, performer and choreographer.

Offered spring semester of odd-numbered years.

DANC2250. Performance Company II. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods. Participation as a dancer in a faculty-choreographed dance piece.

Offered fall and spring semesters.

DANC2620. Multicultural Dance. 1 hour. Repeatable for maximum 1.5 hours credit. One 2-hour lab period.

Dance forms indigenous to specific regions of the world.

Offered fall semester.

DANC2630. Methods of Teaching Social Dance. 1 hour. One lecture and two 1-hour lab periods.

Methods of teaching ballroom, folk, line, and square dance to grades prekindergarten through twelve.

Offered fall semester.

DANC2640. Jazz Dance I. 1 hour. One 2-hour lab period.

Movement application for improving the technical execution and stylistic definition of jazz dance.

Offered fall semester.

DANC2650. Modern Dance I. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

The acquisition and development of technical skills in modern dance. Techniques basic to this dance form

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plus motional properties as they relate to dance will be emphasized.

Offered fall and spring semesters.

DANC 2660. Ballet I. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Designed to build the strength, flexibility, endurance, and control necessary for performance of low intermediate-level ballet barre exercises, adagio sequences, and allegro enchainments. An understanding of proper body mechanics and the French vocabulary will also be emphasized.

Offered fall and spring semesters.

DANC 2670. Pointe I. 1 hour. Two 1-hour lab periods.

Prerequisite: DANC 2660.

Basic vocabulary and skills of classical ballet transferred to dancing on pointe.

Offered fall semester.

DANC 2680. Pas de Deux I. 1 hour. One 2-hour lab period.

Designed to develop the intermediate level dance student's ability to transfer classical ballet skills into partnered pas de deux work.

Offered spring semester.

DANC 2690. Ballroom Dance I. 1 hour. Two 2-hour lab periods.

Designed for the student possessing a foundation in social dance. Universally popular ballroom dances from the American style syllabus will be presented at the beginning level.

Not offered on a regular basis.

DANC 2850. Pre-Professional Performance Company I. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.

The practice and experience of dancer performance in a dance company. Training and participation in all areas critical to the operation of a dance company, including mainstage performance, touring, and management of all production concerns.

Offered fall and spring semesters.

DANC 3000. Production Assignment. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.

Experience in publicity, graphic design, stage lighting, stage management, and costuming through faculty-supervised and monitored participation as a member of the production crew for three dance concerts sponsored by the department of Dance.

Offered fall and spring semesters.

DANC 3010. Dance Improvisation I. 2 hours. One lecture and two 1-hour lab periods.

Provides the individual an opportunity to explore movement initiated through various sources including internal motivation. Emphasis will be on individual and

group interaction within structured and free improvisational situations, all for the purpose of developing student's creative approach to composing and performing.

Offered spring semester of odd-numbered years.

DANC 3200. Teaching Practicum in Dance I. 1 hour. Two 1-hour lab periods.

Directed observation and teaching of dance classes preschool through college.

Offered fall and spring semesters.

DANC 3210. Teaching Practicum in Dance II. 1 hour. Two 1-hour lab periods.

Prerequisite: DANC 3200.

Directed observation and teaching of dance classes preschool through college.

Offered fall and spring semesters.

DANC 3220. Teaching Practicum in Dance III. 1 hour. Two 1-hour lab periods.

Prerequisite: DANC 3210.

Directed observation and teaching of dance classes preschool through college.

Offered fall and spring semesters.

DANC 3250. Performance Company III. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Participation as a dancer in a faculty-choreographed dance piece.

Offered fall and spring semesters.

DANC 3400. Dance Composition I. 2 hours. Two lectures and four 1-hour lab periods.

The principles of dance composition, with emphasis upon the development of solo studies.

Offered fall semester of odd-numbered years.

DANC 3640. Jazz Dance II. 1 hour. Two 2-hour lab periods.

Prerequisite: DANC 2640.

Movement applications for improving technical proficiency, performance dynamics, and stylistic clarity. Dance combinations will explore pop, funk, adagio, blues, and Broadway jazz styles.

Offered spring semester.

DANC 3650. Modern Dance II. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Prerequisite: DANC 2650.

The continued acquisition and development of technical skills in modern dance. Technique and theory basic to this dance form plus motional properties as they relate to dance will be emphasized.

Offered fall and spring semesters.

DANC 3660. Ballet II. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Prerequisite: DANC 2660.

A continuation of training in ballet technique and

performance at the upper intermediate level. Pointe work may be included.
Offered fall and spring semesters.

DANC 3670. Pointe II. 1 hour. Two 1-hour lab periods.
Prerequisite: DANC 2670.

Develops the beginning to intermediate pointe student's ability to transfer to pointe work the vocabulary and skill learned in Ballet II.
Offered fall semester.

DANC 3680. Pas de Deux II. 1 hour. One 2-hour lab period.
Prerequisite: DANC 2680.

Designed to develop the advanced-intermediate level dance student's ability to transfer classical ballet skills into partnered pas de deux work.
Offered spring semester.

DANC 3690. Ballroom Dance II. 1 hour. Two 2-hour lab periods.
Prerequisite: DANC 2690.

Designed for the student having mastered steps at the beginning level of the American style syllabus. Intermediate level steps and figures will be presented, with proper technique and alignment stressed.
Not offered on a regular basis.

DANC 3700. Pedagogy I. 2 hours. Two lectures and one 2-hour lab period.

Designed to introduce the teacher to the skills and activities of creative movement and rhythm for children from nursery school through sixth grade.
Offered spring semester of even-numbered years.

DANC 3720. Topics in Multicultural Education I. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.

Provides dance performance and production experiences to students through the development and presentation of lecture demonstrations. Through residencies in schools and community centers, the student will become familiar with dance as a tool for multicultural interdisciplinary education.
Not offered on a regular basis.

DANC 3850. Pre-Professional Performance Company II. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.
Prerequisite: DANC 2850.

The continued practice and experience of dance performance in a dance company. Training and participation in all areas critical to the operation of a dance company, including mainstage performance, touring, and management of all production concerns.
Offered fall and spring semesters.

DANC 4000. Independent Study in Dance Education. 1-6 hours. Repeatable for maximum 6 hours credit.
Independent study in a selected dance topic.
Non-Traditional Format: Independent study.
Offered fall and spring semesters.

DANC 4010. Science of Dance Training. 2 hours. One lecture and two 1-hour lab periods.

Analysis and exploration of the technical aspects with emphasis on anatomical structure, muscular activity, postural evaluation, and injury prevention care.
Offered fall semester of odd-numbered years.

DANC 4020. Theories of Movement. 2 hours. One lecture and two 1-hour lab periods.

Theoretical and applied principles of human movement embodied in alternative training systems which serve the dancer.
Offered summer semester of even-numbered years.

DANC 4100. Senior Choreographic Project. 2 hours. Two 4-hour lab periods.

Fully produced studio presentation of the student's original choreographic piece.
Offered fall and spring semesters.

DANC 4250. Performance Company IV. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Participation as a dancer in a faculty-choreographed piece.
Offered fall and spring semesters.

DANC 4300. Dance Seminar. 1 hour. One 2-hour lab period.

Seminar discussion of professional issues with particular attention to ethics, employment, and career development.
Offered fall semester of even-numbered years.

DANC 4400. Dance Composition II. 2 hours. Two lectures and four 1-hour lab periods.

Prerequisite: DANC 3400.
Dance composition specifically applied to the development of group choreography.
Offered spring semester of odd-numbered years.

DANC 4500. Dance History I. 3 hours.

Dance as a reflection of culture and an art form from the earliest lineage-based societies through the end of the nineteenth century.
Offered spring semester of odd-numbered years.

DANC 4510. Dance History II. 3 hours.

Prevalent twentieth-century dance forms. Socio-cultural influences and the contributions of individual artists will be investigated.
Offered spring semester of even-numbered years.

DANC 4640. Jazz Dance III. 1 hour. Two 2-hour lab periods.

Prerequisite: DANC 3640.
Extension of material in Jazz Dance II with technical performance emphasis.
Offered summer semester.

Dance Education

DANC 4650. Modern Dance III. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods. Prerequisite: DANC 3650.

High intermediate-level course designed to aid the student in the continued acquisition and development of technical skills in modern dance. Technique and theory basic to this dance form plus motional properties as they relate to dance will be emphasized.

Offered fall and spring semesters.

DANC 4660. Ballet III. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Prerequisite: DANC 3660.

Designed to build the strength, flexibility, endurance, and control necessary for performance of advanced-level ballet barre exercises, adagio sequences, allegro enchainments, and pointe work. Style, perfection, and performance quality will be emphasized.

Offered fall and spring semesters.

DANC 4670. Pointe III. 1 hour. Two 1-hour lab periods.

Prerequisite: DANC 3670.

Develops the intermediate pointe student's ability to transfer to pointe work the vocabulary and skill learned in Ballet III.

Offered fall semester.

DANC 4680. Pas de Deux III. 1 hour. One 2-hour lab period.

Prerequisite: DANC 3680.

Designed to develop the advanced level dance student's ability to transfer classical ballet skills into partnered pas de deux work.

Offered spring semester.

DANC 4690. Ballroom Dance III. 1 hour. Two 2-hour lab periods.

Prerequisite: DANC 3690.

Designed for the student having mastered steps and figures at the intermediate level of the American style syllabus. Dances from the international or English style syllabus will be presented with proper technique and alignment stressed.

Not offered on a regular basis.

DANC 4700. Pedagogy II. 2 hours. Two lectures and one 2-hour lab period.

Content, methods, and materials for dance instruction of the secondary level student. Historical development of dance in education, specific teaching procedures, and assessment are emphasized.

Offered fall semester of odd-numbered years.

DANC 4720. Topics in Multicultural Education II. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.

Prerequisite: DANC 3720.

Provides enhanced dance performance and production experiences to students through the development and presentation of lecture demonstrations. Through residencies in schools and community centers, the student

will become familiar with dance as a tool for multicultural and interdisciplinary education.

Not offered on a regular basis.

DANC 4800. Senior Dance Area Project. 2 hours. Two 2-hour lab periods.

Exploration of a topic stemming from the student's area of emphasis in the dance major program.

Offered fall and spring semesters.

DANC 4850. Pre-Professional Performance Company III. 1 hour. Repeatable for maximum 2 hours credit.

Three 2-hour lab periods.

Prerequisite: DANC 3850.

The continued practice and experiences of dance performance in a dance company. Training and participation in all areas critical to the operation of a dance company, including mainstage performance, touring, and management of all production concerns.

Offered fall and spring semesters.

DANC 5460. Student Teaching in Dance Education. 12 hours.

Prerequisite: DANC 3700 and DANC 4700 and permission of department.

Thirteen-week, full-time teaching assignment in a cooperating school.

Non-Traditional Format: Student teaching.

Offered fall and spring semesters.

DANC 5650. Modern Dance IV. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Prerequisite: DANC 4650.

High intermediate-level course designed to aid the student in the continued acquisition and development of technical skills in modern dance. Technique and theory basic to this dance form plus motional properties as they relate to dance will be emphasized.

Offered fall and spring semesters.

DANC 5660. Ballet IV. 1 hour. Repeatable for maximum 2 hours credit. Two 2-hour lab periods.

Prerequisite: DANC 4660.

Builds strength, flexibility, endurance, and control necessary for performance of highly advanced-level ballet barre exercises, adagio sequences, allegro enchainments, and pointe work. Style, perfection, and performance quality will be emphasized.

Offered fall and spring semesters.

DANC 5670. Pointe IV. 1 hour. Two 1-hour lab periods.

Prerequisite: DANC 4670.

Develops the advanced pointe student's ability to transfer to pointe work the vocabulary and skills learned in Ballet IV.

Offered fall semester.

DANC 5680. Pas de Deux IV. 1 hour. One 2-hour lab period.

Prerequisite: DANC 4680.

Designed to develop the highly advanced level dance

student's ability to transfer classical ballet skills into partnered pas de deux work.
Offered spring semester.

DANC 5850. Pre-Professional Performance Company IV. 1 hour. Repeatable for maximum 2 hours credit. Three 2-hour lab periods.
Prerequisite: DANC 4850.

The continued practice and experience of dance performance in a dance company. Training and participation in all areas critical to the operation of a dance company, including mainstage performance, touring, and management of all production concerns.
Offered fall and spring semesters.

(DRAM) Drama

College of Arts and Sciences, Department of Drama

DRAM 2000. Appreciation of Dramatic Art. 3 hours. Two lectures and one 2-hour lab period.
Aesthetics and craft of the theatrical experience on stage, screen, and television. Discussions and analyses of all aspects of the theatrical arts; critical viewing of performances both in and out of class with written analyses. May not be used for credit towards the drama major. Course may be taken through UGA Studies Abroad program in Drama and Journalism - Italy.
Offered fall, spring, and summer semesters.

DRAM 2010. Introduction to Acting. 3 hours. Three 1-hour lab periods.
Basic acting skills for the non-drama major.
Offered fall, spring, and summer semesters.

DRAM 2040. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.
Prerequisite: Permission of department.
Individual production and/or performance crew assignments.
Offered fall and spring semesters.

DRAM 2050. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.
Prerequisite: Permission of department.
Individual production and/or performance crew assignments.
Offered fall and spring semesters.

DRAM 2060. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period.
Prerequisite: Permission of department.
Individual production and/or performance crew assignments.
Offered fall and spring semesters.

DRAM 2120. Introduction to Cinema. 3 hours. Two lectures and one 2-hour lab period.
Film aesthetics and film as an art form, including critical viewing of selected films in laboratory, and papers on topics in film and audience values.
Offered fall, spring, and summer semesters.

DRAM 2130. American Ethnic Cinema. 3 hours. Two lectures and one 2-hour lab period.
Cultural history of the most important ethnic film makers in the American cinema from the 1920's to the present, with emphasis on stories and styles of the films, as well as on the underlying economic and social contexts.
Offered spring semester.

DRAM 3020. Basic Dramatic Writing. 3 hours.
The principles and process of dramatic writing.
Offered fall and spring semesters.

DRAM 3200. Foundations of Theatre History. 3 hours.
History of theatre and dramatic arts from their beginning to 1800.
Offered fall semester.

DRAM 3210. Foundations of Modern Theatre History. 3 hours.
History of theatre and dramatic arts from 1800 to the present, examining the interplay of theatre with photography, film, radio, television, and computer-based story telling.
Offered spring semester.

DRAM 3290. Script Analysis. 3 hours.
A method for analyzing scripts intended for performance.
Offered fall semester.

DRAM 3300. Foundations of Performance Design. 3 hours.
Basic principles and techniques of design in contemporary performing arts, including the development and practice of scenery, costume, lighting, and other design aspects of stage and media production, with a look at major contemporary designers.
Offered fall and spring semesters.

DRAM 3330. Costuming for the Performance Arts. 3 hours.
Prerequisite: DRAM 3300.
Planning and design of performance costumes, including exploration of drawing, painting, production, and play analysis.
Offered spring semester of even-numbered years.

DRAM 3340. Scenery Fabrication and Painting. 3 hours. Two lectures and one 2-hour lab period.
Prerequisite: DRAM 3300.
Planning, construction, painting, and installation of scenery, props, and rigging.
Offered fall semester.

Drama

DRAM 3500. Acting I: Foundations of Acting. 3 hours. Three 2-hour lab periods. Participation in a series of group and individual activities designed to develop basic acting skills. The course also includes exercises for the actor's voice and body. Open only to drama majors. Offered fall and spring semesters.

DRAM 3520. Makeup for the Performance Arts. 3 hours. Three 2-hour lab periods. Prerequisite: DRAM 3300. Fundamental principles and practices in makeup for stage and media. Drawing and face painting skills as well as practice in use of cosmetics, wigs, hair pieces, and work with departmental productions. Offered fall semester.

DRAM 4000/6000. Dramatic Writing I. 3 hours. Prerequisite: DRAM 3020. Planning, writing, and polishing the short script for performance. Offered spring semester.

DRAM 4250/6250. History of Cinema I. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: DRAM 2120 and junior or senior standing. The development of the international film and of film theories from 1895 to 1945, with emphasis on cinema as a dramatic medium. Offered fall semester.

DRAM 4260/6260. History of Cinema II. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: DRAM 2120 and junior or senior standing. The development of international film and film theories from 1945 to the present, with emphasis on cinema as a dramatic medium. Offered spring semester.

(DRAM)TXMI 4270/6270. History of Costume: Antiquity to Nineteenth Century. 3 hours. Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department. Interrelationships of costume and social, cultural, political, and economic environments from antiquity to the nineteenth century. Offered fall semester of odd-numbered years.

DRAM 4280/6280. Women in Performance. 3 hours. Women's contributions to the performing arts, focusing on contemporary American artists in such fields as theatre, film, dance, performance art, and other contemporary performance genres. Offered spring semester of odd-numbered years.

DRAM 4330/6330. Shakespeare. 3 hours. Three 2-hour lab periods. Prerequisite: DRAM 3500 or permission of department. Performance of Shakespeare's plays. Offered spring semester of even-numbered years.

DRAM 4400/6400. Asian Theatre and Drama. 3 hours. Genres of performance in India, China, Japan, and Southeast Asia. Focus on social and cultural significance of performances, including examples of Noh, Kabuki, Beijing Opera, Kathakali, Kutiyattam, Wayang Kulit, and Topeng. Not offered on a regular basis.

DRAM 4480/6480. History of African American Drama and Theatre. 3 hours. The emergence of a distinct and conscious African American theatre in the United States. Offered spring semester of even-numbered years.

(DRAM)AFAM 4490/6490. African American Women in Cinema: Image and Aesthetics. 3 hours. Prerequisite: Permission of department. Selected films by and about African and African American women. A historical/critical overview of the presentation of these women in cinema with emphasis on contemporary African and African American women filmmakers. Not offered on a regular basis.

DRAM 4800/6800. Topics in History. 3 hours. Repeatable for maximum 6 hours credit. Topical issues in theatre or cinema, combining history and critical analysis of specific significant topics (e.g., national theatre or cinema, animation, authorship, genre). Offered fall and spring semesters.

DRAM 5010. Acting II: Scene Study. 3 hours. Three 2-hour lab periods. Prerequisite: DRAM 3500 and permission of department. Concentration on voice, movement, and character study for actors. Offered fall and spring semesters.

DRAM 5051. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period. Prerequisite: DRAM 2040 or DRAM 2050 or DRAM 2060 or permission of department. Open only to drama majors. Individually assigned production and/or performance crew. Offered fall and spring semesters.

DRAM 5052. Applied Drama Laboratory. 1 hour. Repeatable for maximum 2 hours credit. One 2-hour lab period. Prerequisite: DRAM 5051. Open only to drama majors. Individually assigned production and/or performance crew. Offered fall and spring semesters.

DRAM 5053. Senior Seminar. 3 hours. Prerequisite: Senior standing or permission of department. The current status of dramatic arts with specific planning and preparation to enter into the profession. The

course includes Senior Exit Examination. Open only to drama majors.

Offered fall semester.

DRAM 5310/7310. Technical Problems. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: DRAM 3340.

Special topics in advanced theory and techniques of performance technology, including scenery construction and rigging, costume construction, lighting technology, and sound.

Offered spring semester.

DRAM 5320/7320. Computer-Aided Design for the Performance Arts. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Prerequisite: DRAM 3300 and permission of department.

Techniques of computer-aided design and drafting in the performing arts.

Offered fall semester.

DRAM 5340/7340. History of Costume and Decor. 3 hours.

Prerequisite: DRAM 3300.

The styles of costuming, architecture, furnishing, and ornamentation in significant theatrical periods.

Offered fall semester.

DRAM 5351/7351. Design for the Performance Arts I. 3 hours. Three 3-hour lab periods.

Prerequisite: DRAM 3300.

Design for the performing arts (scenery, costume, lighting), emphasizing conceptualization and application for basic research and technology to meet dramatic needs.

Offered fall semester.

DRAM 5352/7352. Design for the Performance Arts II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5351/7351.

Design for the performing arts (scenery, costume, lighting, sound) emphasizing conceptualization and application using current and advanced methods and technology.

Offered spring semester.

DRAM 5380/7380. Design Technology for the Performance Arts. 3 hours.

Prerequisite: DRAM 3300.

Basic technology for performance production. Costume materials and construction, scenery rigging and movement, lighting equipment and technology, and sound equipment and practices.

Offered spring semester of odd-numbered years.

DRAM 5500. Acting III: Advanced Acting. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5010.

Role analysis and the problems and techniques of

creating subtext with special relation to text and improvisation.

Offered spring semester.

DRAM 5510. Actor Training I: Physical Actor. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5500 and permission of department.

Intensive study in physical techniques for the actor.

Offered spring semester of even-numbered years.

DRAM 5530. Actor Training II: Voice for the Actor. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5500 and permission of department.

Intensive training in voice techniques for the actor.

Offered fall semester of even-numbered years.

DRAM 5560. Acting in Period Styles. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5500 and permission of department.

Problems and techniques of acting in periods and styles through intensive scene study and performance.

Offered spring semester of odd-numbered years.

DRAM 5570. Acting for the Camera. 3 hours. Three 2-hour lab periods.

Prerequisite: (DRAM 5500 or DRAM 5530) and permission of department.

Applying theatre acting techniques to the demands of modern media. Practical work in class with emphasis on the vocal and physical demands of dramatic material designed for television and cinema.

Offered fall semester of odd-numbered years.

DRAM 5590. Special Projects in Drama. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Special projects for the advanced student, including internships.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

DRAM 5600. Play Direction. 3 hours. Three 2-hour lab periods.

Basic methods and procedures of the art of dramatic directing.

Offered fall semester.

DRAM 5610/7610. Play Direction Laboratory. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5600.

The director's analysis of the script, the actor-director relationship, and theatrical style. Each student directs a one-act play or short film.

Offered spring semester.

Drama/ Agricultural Education

DRAM 5620/7620. Dramatic Writing II. 3 hours.

Prerequisite: DRAM 4000/6000.

Developing the full length script for performance.

Offered fall semester of even-numbered years.

DRAM 5630/7630. Producing the New Script. 3 hours.

Three 2-hour lab periods.

Prerequisite: Permission of department.

Critical and practical work in producing new scripts for writers, actors, directors, and designers.

Offered fall semester of odd-numbered years.

DRAM 5640/7640. Directing for the Cinema. 3 hours.

Three 2-hour lab periods.

Prerequisite: DRAM 5600 or permission of department.

Theories and techniques of the dramatic cinema.

Offered fall semester.

DRAM 5751/7751. Design for the Performance Arts III. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5352/7352.

Projects in design (scenery, costume, lighting), with an emphasis on multi-character, multi-setting design and highly complex designs using traditional methods and technologies.

Offered fall semester.

DRAM 5752/7752. Design for the Performance Arts IV. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5751/7751.

Projects in design (scenery, costume, lighting, sound) with an emphasis on multi-character, multi-setting and highly complex designs using current and advanced methods and technologies.

Offered spring semester.

DRAM 5810/7810. Computer Animation for Dramatic Media I. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 3300 and permission of department.

Computer animation in television, film, and theatre from the perspective of the director/animator. The hardware and software necessary to create computer animation is accompanied by the principles of kinetics and narrative story-telling in a visual medium.

Offered fall and spring semesters.

DRAM 5820/7820. Computer Animation for Dramatic Media II. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5810/7810 or permission of department.

Advanced computer animation techniques and digital compositing which integrate live action with computer generated environments.

Offered spring semester.

DRAM 5830/7830. Computer Animation for Dramatic Media III. 3 hours. Three 2-hour lab periods.

Prerequisite: DRAM 5820/7820 or permission of department.

Preparation of a portfolio-quality computer animation

project, including a narrative script story book, pre-production meetings, schedules and budgets, production and post-production.

Offered fall semester of odd-numbered years.

DRAM 5860/7860. Interactive Multimedia as a Dramatic Medium. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

Practice and theory of interactive multimedia as a dramatic medium. Multimedia hardware and software, principles of interactive design, and comparison of development tools and delivery systems including CD-ROM and the World Wide Web.

Offered fall semester of even-numbered years.

DRAM 5870/7870. Interactive Multimedia and Live Performance. 3 hours. Three 2-hour lab periods.

Prerequisite: Permission of department.

The use of computers to trigger and manipulate media events, including sound, lighting, digital images and video, and techniques allowing performers and spectators to interact with such media events in real time. Topics include sensors, motion capture, MIDI, and theoretical issues concerning the interaction between live performance and media.

Offered on a regular basis.

(EAGR) Agricultural Education

College of Education, Department of Occupational Studies

EAGR 4010/6010. Agricultural Education Leadership Seminar. 1 hour. Repeatable for maximum 5 hours credit. One 1-hour lab period.

Current problems in teaching agricultural education and training in specialized areas relevant to the needs of future teachers of agricultural education.

Non-Traditional Format: Involvement in off-campus Agricultural Education/FFA activities will also be required in order to succeed in the class.

Offered fall and spring semesters.

EAGR 4340/6340. Developing Community Programs in Agriculture. 3 hours.

Developing the components of high school agriculture education programs, including collection and use of demographic data to design and implement community based programs.

Offered spring semester.

EAGR 4350/6350. Curriculum Planning in Agricultural Education. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for agricultural education.

Offered fall semester.

EAGR 4360/6360. Instructional Strategies in Agricultural Education. 3 hours.

Study and evaluation of teaching materials, methods, techniques, and strategies utilized in agricultural education.

Offered fall semester.

EAGR 5460. Student Teaching in Agricultural Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Full-time supervised student teaching experience in an existing agricultural education program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall and spring semesters.

(EBUS) Business Education

College of Education, Department of Occupational Studies

EBUS 4010/6010. Business Communication. 3 hours.

Theory and practice of thinking, reading, writing, speaking, and listening processes involved in business education.

Offered fall semester.

EBUS 4020/6020. Computer Concepts and Operating Systems for Occupational Studies. 3 hours.

Computer hardware and software operating procedures, data organization and representation. Current trends in occupational uses of computer technology and instructional approaches for teaching operating systems.

Offered fall and spring semesters.

EBUS 4350. Curriculum Planning in Business Education. 3 hours.

Prerequisite: Permission of department.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for business education.

Offered fall and spring semesters.

EBUS 5030/7030. Word Processing Applications. 3 hours.

Prerequisite: Permission of department.

Word processing with popular software packages. Focus is on advanced features of word processing packages, including merging, sorting, mathematical functions, and desktop publishing and instructional approaches for teaching word processing in occupational studies.

Offered on a regular basis.

EBUS 5060/7060. Desktop Publishing in Occupational Studies. 3 hours.

Computer applications for electronic publishing, including elements of page design, effective publications, presentations, instructional materials, and instructional approaches for teaching desktop publishing in occupational studies.

Offered spring semester.

EBUS 5070/7070. Office Management. 3 hours.

Office management, including practices, supervision, information management, methods and procedures, job organization, evaluation, selection, and training of office personnel.

Offered spring semester.

EBUS 5090/7090. Spreadsheet and Presentation Applications in Occupational Studies. 3 hours.

Prerequisite: Permission of department.

Spreadsheet and presentation software, including spreadsheet commands, graphs, data sorting, querying, and macro design and presentation software commands, design, sequencing and practice demonstration. Instructional approaches for teaching spreadsheets and presentation software in occupational studies.

Offered fall and spring semesters.

EBUS 5100/7100. Systems Analysis and Design for Occupational Studies. 3 hours.

Prerequisite: (EBUS 5090/7090 and CSC15330/7330) or permission of department.

Technical background and knowledge for teaching information systems development and implementation in occupational studies. Instructional strategies for project management, documentation standards, hardware and software considerations, systems design, and program languages.

Offered fall and spring semesters.

EBUS 5460. Student Teaching in Business Education.

1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised student teaching experience in a business education program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall and spring semesters.

EBUS 5760/7760. Consumer Financial Planning. 3 hours.

Prerequisite: ECON 2105.

Consumer problems encountered during and after school years. How the economy functions, wise purchase decisions, managing money, evaluating sales and advertising practices, and guarding against unwise buying practices. Instructional approaches for teaching financial planning in occupational studies.

Offered fall semester.

(ECHD) Counseling and Human Development Services

College of Education, Department of Counseling and Human Development Services

ECHD 3010. Paraprofessional Helping Strategies. 1-3 hours. Repeatable for maximum 6 hours credit.

Development of basic skills needed by student peer helpers and other paraprofessionals in various educational settings.

Offered fall and spring semesters.

ECHD 3050. Career and Life Planning. 1-3 hours. Repeatable for maximum 6 hours credit.

The process of career and life planning and developing skills necessary for informed career decision making. Focus is on the processes of self-assessment, decision making, career exploration, and preparation for employment.

Offered fall and spring semesters.

ECHD 4000. Special Problems in Counseling and Human Development Services. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Current philosophical, psychological, sociological, and developmental trends, unique interests, special training needs, and research efforts of students.

Non-Traditional Format: May be taught as an independent study for an individual or group, or as a formal class for all students.

Offered fall and spring semesters.

ECHD 4020/6020. Interpersonal Relationships. 3 hours.

Prerequisite: Permission of department.

Interpersonal skills are taught and demonstrated by the instructor. Students practice the skills in role-playing situations. Skills included are physical attending, psychological attending, listening, perceiving surface and underlying feelings, basic responding skills, personalizing skills, and initiating skills.

Offered fall and spring semesters.

(ECOL) Ecology

College of Arts and Sciences, Institute of Ecology

ECOL 1000-1000L. Ecological Basis of Environmental Issues. 3 hours. Two lectures and one 3-hour lab period.

Not open to students with credit in GEOG 1125-1125D or ECOL 3070.

Ecological concepts that form the basis for understanding environmental issues confronting us; population growth, loss of diversity, resource limitation, pollution, and global climate change. Course may be taken through UGA Studies Abroad program in Oxford.

Offered fall and spring semesters.

ECOL 3070. Environment and Humans. 3 hours.

Not open to students with credit in ECOL 1000-1000L or GEOG 1125-1125D.

Macro-environmental problems currently faced by humans placing them in historical perspective, and relating them to the natural laws and ecological processes which govern the outcome of human-environmental interactions.

Not offered on a regular basis.

ECOL(FORS) 3260-3260L. Vertebrate Diversity and Evolution. 4 hours. Two lectures and two 2-hour lab periods.

Not open to students with credit in CBIO 3000-3000L. Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or permission of department.

The evolution, diversity, and higher order relationships of vertebrate animals and their principal adaptations to life.

Offered fall semester.

ECOL(BIOL) 3500-3500L. Ecology. 4 hours. Three lectures and one 3-hour lab period.

Not open to students with credit in GEOG 3210.

Prerequisite: BIOL 1108-1108L and MATH 2200, 2200L and CHEM 1211 and CHEM 1211L.

Population structure and dynamics, organization and classification of communities, and nutrient and energy flows in ecosystems.

Offered fall and spring semesters.

ECOL(BIOL) 3510. Ecology Laboratory. 3-4 hours. Repeatable for maximum 10 hours credit.

Prerequisite: ECOL(BIOL) 3500-3500L.

Techniques and methodologies to assess organismal, population, community, or ecosystem interactions.

Non-Traditional Format: A field course taught for blocks of time off-campus (semester breaks or summer). Additional on-campus lecture hours may be added depending upon the field schedule.

Not offered on a regular basis.

ECOL 3520. Ecological Applications. 3 hours.

Prerequisite: ECOL(BIOL) 3500-3500L.

Current ecological approaches used to quantify impacts of natural and human disturbances on ecosystem structure and function. Case studies illustrate impacts and management strategies in fields such as environmental toxicology, conservation ecology, agroecosystem ecology, and restoration ecology.

Offered spring semester.

(ECOL)FORS 3580-3580L. Vertebrate Natural History. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: BIOL 1108-1108L.

Life history strategies of vertebrates with emphasis on ecology, behavior, taxonomy, and systematics.

Offered fall and spring semesters.

ECOL 3900. Directed Reading. 2-3 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Junior or senior standing and permission of department.

Detailed study of a restricted area of ecology through reading and discussion of original papers and reviews under the direction of a faculty supervisor.

Non-Traditional Format: Faculty members will arrange contact hours with individual student.

Offered fall, spring, and summer semesters.

ECOL 4000/6000-4000L/6000L. Organismal, Population, and Community Ecology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210, 2210L.

The evolution, physiology, and diversity of organisms; the birth, death, and movement of organisms, with particular reference to population dynamics; the forces that structure communities of plants and animals.

Offered fall semester.

ECOL 4010/6010-4010L/6010L. Ecosystem Ecology. 4 hours. Two lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210, 2210L and STAT 4210 and senior standing.

Ecosystem structure and function with emphasis on energetic and biogeochemical processes in natural and managed ecosystems. Methodology of ecosystem analysis, including field, laboratory, and computer techniques.

Non-Traditional Format: Weekend field trips.

Offered spring semester.

ECOL 4020/6020-4020L/6020L. Field Systems Ecology. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: ECOL(BIOL) 3500-3500L and MATH 2210, 2210L.

Ecology, field biology, and dynamic processes of terrestrial and aquatic ecosystems integrated by empirical monitoring and systems modeling within a campus watershed. Field trips to the Smoky Mountains and Georgia coast will extend the principles to a regional geographic scale.

Non-Traditional Format: The projects will be conducted on an unscheduled basis, requiring open access to laboratory and computer facilities.

Offered fall semester of even-numbered years.

ECOL 4030/6030-4030L/6030L. Mammalogy. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: ECOL(FORS) 3260-3260L or permission of department.

Taxonomy, distribution, ecology, and evolution of mammals.

Offered fall semester.

ECOL 4040/6040-4040L/6040L. Herpetology. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: BIOL 1108-1108L.

Evolution, ecology, behavior, structure, and physiology of amphibians and reptiles.

Offered spring semester.

ECOL 4050/6050-4050L/6050L. Ichthyology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: ECOL(FORS) 3260-3260L.

Taxonomy, distribution, ecology, evolution, and conservation of the marine and freshwater fishes of eastern North America.

Offered spring semester.

ECOL 4060/6060-4060L/6060L. Ornithology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: BIOL 1108-1108L.

Identification, classification, life histories, evolution, and behavior of birds, with an emphasis on Georgia species.

Offered spring semester of even-numbered years.

ECOL 4070/6070-4070L/6070L. Invertebrate Zoology. 4 hours. Three lectures and two 3-hour lab periods.

Prerequisite: BIOL 1108-1108L.

Functional morphology, taxonomy, phylogeny, and general biology of invertebrates.

Offered fall semester.

ECOL 4110/6110. Insect Diversity. 4 hours. One lecture and three 2-hour lab periods.

Prerequisite: Permission of department.

The biodiversity of tropical and temperate insects, including theoretical issues, natural history, and methods for study.

Offered fall semester of even-numbered years.

(ECOL)ANTH 4210/6210. Zooarchaeology. 3 hours.

Prerequisite: ANTH 1102 or BIOL 1104-1104L or BIOL 1108-1108L or permission of major.

Animal remains recovered from archaeological sites, studied in light of zoological and archaeological methods and theories and interpreted in terms of human and animal behavior.

Not offered on a regular basis.

ECOL 4240/6240-4240L/6240L. Physiological Ecology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: BIOL 1108-1108L.

Physiological responses of organisms to environmental factors.

Not offered on a regular basis.

(ECOL)ANTH 4290/6290. Environmental Archaeology. 3 hours. Three lectures and one 1-hour lab period.

Prerequisite: ANTH 1102 or permission of major.

Prehistoric and historic human subsistence patterns through the methods and techniques of zooarchaeology, paleobotany, and paleonutrition. Theories of environmental reconstruction.

Not offered on a regular basis.

ECOL(FORS) 4310/6310-4310L/6310L. Limnology. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: ECOL(BIOL) 3500-3500L or FORS 3300.

Aquatic ecosystems (lakes and streams) and their biota. Linkages between terrestrial and aquatic ecosystems.

Offered fall semester.

Ecology/Economics

ECOL 4940. Internship in Ecology. 2-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ECOL(BIOL) 3500-3500L and permission of department.

Supervised work experience with public agencies, non-profit environmental organizations, or industry concerning ecological topics.

Non-Traditional Format: Faculty members will arrange work hours with sponsoring agency. Faculty will arrange meetings with student to discuss progress.

Offered fall, spring, and summer semesters.

ECOL 4950. Senior Seminar. 1 hour. Repeatable for maximum 3 hours credit.

Prerequisite: Senior standing or permission of department.

Discussion and critical appraisal of reports of original research and/or surveys of the technical literature in ecology. Students will be responsible for oral presentations on current topics.

Offered fall and spring semesters.

ECOL 4960. Research. 2-4 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Junior or senior standing and permission of department.

Independent research in ecology under direction of individual faculty members.

Non-Traditional Format: Faculty members will arrange contact hours with individual student.

Offered fall and spring semesters.

ECOL 4990. Senior Thesis. 3 hours.

Prerequisite: ECOL 4960 and permission of department.

Preparation of a written thesis, based upon research carried out under direction of a faculty supervisor.

Non-Traditional Format: Faculty will arrange contact hours with individual student.

Offered fall, spring, and summer semesters.

(ECON) Economics

Terry College of Business, Department of Economics

ECON 1100. Analysis of Strategic Games. 3 hours.

The analysis of players' strategies and their outcomes when each player's best strategy depends on the (expected) actions of others. Circumstances leading to both cooperative and noncooperative outcomes are considered, with economic and other applications.

Offered on a regular basis.

ECON 2100. Economics of Environmental Quality. 3 hours.

Not open to students with credit in ECON 4150.

Prerequisite: ECON 2106 and ECON 2105.

The economic analysis of environmental issues, with discussions of current environmental quality problems,

their underlying causes, and command vs. market-based solutions.

Offered on a regular basis.

ECON 2105. Principles of Macroeconomics. 3 hours.

Explanations of economic growth and the business cycle, aimed at shedding light on economy-wide problems such as inflation and unemployment, with special attention to the role played by monetary and fiscal policies.

Offered on a regular basis.

ECON 2105H. Principles of Macroeconomics (Honors). 3 hours.

Not open to students with credit in ECON 2105.

Prerequisite: Permission of Honors.

Explanations of economic growth and the business cycle, aimed at shedding light on economy-wide problems such as inflation and unemployment, with special attention to the role played by monetary and fiscal policies.

Offered on a regular basis.

ECON 2106. Principles of Microeconomics. 3 hours.

Laws governing the use of scarce resources by producers and consumers in market economies, with emphasis on the role played by prices. The consequences of government involvement in the economy are studied, with examples taken from current policy issues.

Offered on a regular basis.

ECON 2106H. Principles of Microeconomics (Honors). 3 hours.

Not open to students with credit in ECON 2106.

Prerequisite: Permission of Honors.

Laws governing the use of scarce resources by producers and consumers in market economies, with emphasis on the role played by prices. The consequences of government involvement in the economy are studied, with examples taken from current policy issues.

Offered on a regular basis.

ECON 2200. Economic Development of the United States. 3 hours.

Not open to students with credit in ECON 2200H or ECON 4700.

Prerequisite: ECON 2106 and ECON 2105.

The United States' growth and transformation into an industrialized nation, exploring the contributions of diverse cultural groups. The rise of the corporation, slavery, government regulation, banking, transportation, the economic role of women and minorities, the Great Depression, and rapid post-World War II growth.

Offered on a regular basis.

ECON 2200H. Economic Development of the United States (Honors). 3 hours.

Not open to students with credit in ECON 2200 or ECON 4700.

Prerequisite: ECON 2106 and ECON 2105 and permission of Honors.

The United States' growth and transformation into an industrialized nation, exploring the contributions of diverse cultural groups. The rise of the corporation, slavery, government regulation, banking, transportation, the economic role of women and minorities, the Great Depression, and rapid post-World War II growth. Offered on a regular basis.

ECON 4000. The Economics of Human Resources. 3 hours.

Not open to students with credit in ECON 4600.

Prerequisite: ECON 2106 and ECON 2105.

The application of microeconomic principles to the study of the behavior of individuals and business firms in the labor market. The roles of private institutions and public policies in affecting worker compensation, employment, unemployment, and the distribution of labor-market earnings.

Offered on a regular basis.

ECON 4010. Intermediate Microeconomics. 3 hours.

Prerequisite: ECON 2106 and ECON 2105 and MATH 2200, 2200L.

Resource allocation in a market economy, with an emphasis on the workings of the price system under competitive and monopolistic conditions. The welfare costs of departures from perfect competition are examined, and students are introduced to game theory and the economics of information.

Offered on a regular basis.

ECON 4020. Intermediate Macroeconomics. 3 hours.

Prerequisite: ECON 2106 and ECON 2105 and MATH 2200, 2200L.

Theories aimed at explaining observed levels of national income, unemployment, inflation, interest rates, and exchange rates, with critical evaluations of alternative domestic and international fiscal and monetary policies.

Offered on a regular basis.

ECON 4030. Money and Banking. 3 hours.

Not open to students with credit in ECON 4100.

Prerequisite: ECON 2106 and ECON 2105.

Money and banks in the economy, with lectures on financial intermediation, how interest rates are determined, domestic banking regulations, international banking and exchange rates, and monetary theory and policy.

Offered on a regular basis.

ECON 4030H. Money and Banking (Honors). 3 hours.

Not open to students with credit in ECON 4030 or ECON 4100.

Prerequisite: ECON 2106 and ECON 2105 and permission of Honors.

Money and banks in the economy, with lectures on financial intermediation, how interest rates are determined, domestic banking regulations, international banking and exchange rates, and monetary theory and policy.

Offered on a regular basis.

ECON 4040. The International Business Environment. 3 hours.

Not open to students with credit in ECON 4550.

Prerequisite: ECON 2106 and ECON 2105.

Trade, macroeconomic policy, and financial-market issues and theories of relevance to multi-national firms, with applications to recent events.

Offered on a regular basis.

ECON 4100. Monetary Economics. 3 hours.

Not open to students with credit in ECON 4030 or ECON 4030H.

Prerequisite: ECON 4010 or ECON 4020.

Money and financial markets, emphasizing the evolution and economic rationale of money and financial institutions, determinants of the price level and interest rates, alternative monetary policies, and international monetary relations.

Offered on a regular basis.

ECON 4150. Environmental Economics. 3 hours.

Prerequisite: ECON 4010.

The economic foundations of global environmental problems, including air and water pollution and the depletion of natural resources, with discussions of alternative (command and market-based) solutions.

Offered on a regular basis.

ECON 4200. Economic Growth and Development. 3 hours.

3 hours.

Prerequisite: ECON 4010.

Problems and programs of economic growth; specific attention directed to underdeveloped areas, national economies, and regions. International agencies and coordinated efforts in economic development processes will be appraised within a theoretical reference.

Offered on a regular basis.

ECON 4300. Public Sector Economics. 3 hours.

Prerequisite: ECON 4010.

Government's economic role, with discussions of what governments should (or shouldn't) do, and of what they do in fact. Major tax and spending programs are critically examined, and proposals for changing them are considered.

Offered on a regular basis.

ECON 4350/6350. Industrial Economics. 3 hours.

Prerequisite: ECON 4010.

Firms' performances and conduct toward rival firms, suppliers, and customers under different market structures, including perfect competition and monopoly. The rationale and consequences of antitrust regulation and other public policies.

Offered on a regular basis.

ECON 4400/6400. Economics of Public and Regulated Enterprises. 3 hours.

Prerequisite: ECON 4010.

The economic analysis of regulated and nationalized industries and organizations, with emphasis on the

Economics

regulation of electric, natural gas, and telecommunications enterprises. Methods and implications of privatization of traditionally "public" enterprises are also considered.

Offered on a regular basis.

ECON 4450/6450. Economic Analysis of Law. 3 hours.
Prerequisite: ECON 4010.

An efficiency-based perspective on major areas of the law, including contract, tort, and nuisance law, which points to the reduction of transactions costs as unifying legal principle.

Offered on a regular basis.

ECON 4500. Monetary Policy. 3 hours.
Prerequisite: ECON 4010 and ECON 4100.

The theory and practice of monetary policy, including discussions of rationales for government involvement in money and banking, actual central bank behavior, the choice of monetary rules versus discretion, and how alternative monetary regimes might work.

Offered on a regular basis.

ECON 4550. International Trade: Theory and Policy. 3 hours.

Prerequisite: ECON 4010.

The determinants of world trade patterns, with discussions of immigration, capital mobility, inter-industry trade, transfer payments, and recent developments in international trade policy.

Offered on a regular basis.

ECON 4600. Labor Economics. 3 hours.
Prerequisite: ECON 4010.

The application of microeconomics to the study of labor markets. The demand for and supply of labor, compensating wage differentials, human capital investment, alternative compensation policies, unions, discrimination, and unemployment.

Offered on a regular basis.

ECON 4650/6650. Economics of Organizations and Management. 3 hours.

Prerequisite: ECON 4010.

Decision making within firms and public organizations, using standard microeconomic tools. Transaction costs and the size of the firm, the compensation and motivation of workers, mergers and corporate control, team production, and the theory of bureaucracy.

Offered on a regular basis.

ECON 4700. Economic History of the United States. 3 hours.

Prerequisite: ECON 4010.

Economic analysis is combined with historical narrative to explore the evolution of the United States' economy from its agrarian origins to its current status as an industrialized nation. Basic economic reasoning is used to explain the course, sources, and consequences of United States economic change, with particular emphasis on the twentieth century.

Offered on a regular basis.

ECON 4750. Introduction to Econometrics. 3 hours.
Prerequisite: ECON 4010 and STAT 2000.

Estimation and hypothesis-testing techniques using the linear regression model, with emphasis on the least-squares estimator and its performance under different statistical assumptions. A hands-on approach, stressing applications to empirical problems in economics.

Offered on a regular basis.

ECON 5900. Senior Thesis. 1 hour.

Prerequisite: ECON 4010 and senior standing.

An extensive economics research paper, written under the direction of a faculty member. This course should be taken during the term just prior to the student's planned graduation.

Non-Traditional Format: Directed study.

Offered on a regular basis.

ECON 5900H. Senior Thesis (Honors). 3 hours.

Not open to students with credit in ECON 5900.

Prerequisite: ECON 4010 and senior standing and permission of Honors.

An extensive economics research paper, written under the direction of a faculty member. This course should be taken during the term just prior to the student's planned graduation.

Non-Traditional Format: Independent research and thesis preparation.

Offered on a regular basis.

ECON 5960H. Tutorial (Honors). 1-9 hours.

Prerequisite: ECON 4010 and senior standing and permission of Honors.

Reading and independent research on a specified topic beyond normal course offerings and supervised by a faculty member.

Non-Traditional Format: Directed study. Students must apply to the department head at least five weeks in advance of registration.

Offered on a regular basis.

ECON 5970H. Tutorial (Honors). 1-9 hours.

Prerequisite: ECON 4010 and senior standing and permission of Honors.

Reading and independent research on a specified topic beyond normal course offerings and supervised by a faculty member.

Non-Traditional Format: Directed study. Students must apply to the department head at least five weeks in advance of registration.

Offered on a regular basis.

ECON 5980H. Tutorial (Honors). 1-9 hours.

Prerequisite: ECON 4010 and senior standing and permission of Honors.

Reading and independent research on a specified topic beyond normal course offerings and supervised by a faculty member.

Non-Traditional Format: Directed study. Students must apply to the department head at least five weeks in advance of registration.

Offered on a regular basis.

ECON 5990. Economics Tutorial. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ECON 4010 and senior standing.

Reading and independent research on a specified topic beyond normal course offerings and supervised by a faculty member.

Non-Traditional Format: Directed study. Students must apply to the department head at least five weeks in advance of registration.

Offered on a regular basis.

(EDEC) Early Childhood Education

College of Education, Department of Elementary Education

EDEC 3000. Orienting Practicum. 1-4 hours. Repeatable for maximum 12 hours credit.

Short term (20-30 hours) field experience during which the student will observe and become minimally involved in the teaching/learning processes of each of the levels of early childhood education (nursery, kindergarten, and primary) coupled with occasional scheduled seminars.

Non-Traditional Format: Practicum.

Offered fall and spring semesters.

EDEC 4000. Special Problems in Early Childhood Education. 1-3 hours. Repeatable for maximum 6 hours credit.

Selected students are permitted to secure specialized training appropriate to the needs of the individual. The student's project may involve intensive library investigation in a special field or the collection and analysis of original data pertinent to a given problem.

Non-Traditional Format: Individual/special projects.

Offered fall, spring, and summer semesters.

EDEC(CHFD) 4010. Orientation to Early Childhood Education. 1 hour.

Prerequisite: Permission of department.

Translation of theories about how children learn into ideas for application in the classroom. Bases for developmentally appropriate practices are examined in light of the students' own experiences as learners.

Offered fall and spring semesters.

EDEC(CHFD) 4020. Decision Making for Planning, Teaching, and Organizing Early Childhood Classrooms. 3 hours.

Prerequisite: Permission of department.

Reflective decision making that incorporates the major themes, concepts, and skills involved in organizing, planning, and developing instruction in early childhood classrooms.

Offered fall and spring semesters.

EDEC(CHFD) 4030. Integrated Curricular Practices in Early Childhood Education. 3 hours.

Prerequisite: Permission of department.

Develop philosophical perspectives of teaching and classroom management, consider effective parent-teacher relations, and connect with the wider community as a resource context for teaching and learning. Plan and teach an integrated, thematic curriculum unit for prekindergarten through grade five as part of the field component.

Offered fall and spring semesters.

EDEC(CHFD) 4040. Special Topics in Early Childhood Education. 3 hours.

Corequisite: EDEC(CHFD) 5460.

A forum for issues of professionalism connected to professional teaching experiences. Topics may vary depending on student-generated issues and concerns. Offered on a regular basis.

EDEC 5000. Organization in Early Childhood Classrooms. 3 hours.

Investigation of early childhood education principles and practices which are germane to organizing and operating the classroom for learners in prekindergarten through grade five. Students will acquire knowledge of important theoretical approaches in this area as well as practical skills applicable to their work with young children.

Not offered on a regular basis.

(EDEC)EDMS 5060. Service Learning. 3 hours.

History, rationale, research, methodology, and outcomes of service learning. Students will conceptualize, plan, and participate in a service learning project. Emphasis is on how service can be incorporated into curriculum with a primary focus on learning.

Not offered on a regular basis.

(EDEC)SPED 5100. Introduction to Early Childhood Special Education. 3 hours.

Prerequisite: Permission of department.

Meeting individual needs of children with disabilities in early childhood education environments. Emphases on methods for including young children with disabilities in typical environments. Topics include history and rationale for ECSE, family focused intervention, methods for teaming, embedding developmentally appropriate objectives in natural contexts.

Offered on a regular basis.

(EDEC)CHFD 5150. Families, Schools, and Communities. 3 hours.

Prerequisite: CHFD 3920 and EDEC(CHFD) 4020 and CHFD 4860/6860 and permission of department.

Families and their relationship with schools and communities. Implications for selected areas of practice, such as early childhood educational practices, emphasized.

Offered fall semester of odd-numbered years.

EDEC(CHFD) 5460. Student Teaching in Early Childhood Education. 3-15 hours.

A prekindergarten through grade five classroom teaching experience under the direction of a teacher and an early childhood education faculty member.

Non-Traditional Format: Student teaching/field based in schools.

Offered fall and spring semesters.

(EDES) Environmental Design *School of Environmental Design*

EDES 1500. Design and the Environment. 3 hours.

The built environment and its effects on natural systems. Focus is on the design of the built environment as an ongoing activity integrating ecological, social, and cultural values. Topics include land use patterns and policies, development and resource management, community design issues, and strategies for improving environmental integrity and quality of life.

Offered fall semester.

EDES 2210. Design Communication I. 2 hours. Two 2-hour lab periods.

Manual and computerized drafting skills/design drawing with an emphasis on the development of basic visual and computer literacy.

Offered fall semester.

EDES 2220. Design Communication II. 2 hours. Two 2-hour lab periods.

Prerequisite: EDES 2210.

A continuation of Design Communication I, with emphasis on applying design drawing/presentation graphics and verbal presentation skills to express and explore design ideas.

Offered spring semester.

EDES 2510. History of the Built Environment I. 3 hours.

Architecture, landscape architecture, and urban design from ancient times through the Renaissance. Emphasis is on the relationship between design of the built environment and socio-cultural, technological, aesthetic, and environmental factors.

Offered fall semester.

EDES 2520. History of the Built Environment II. 3 hours.

Architecture, landscape architecture, and urban design from 1600 to the present. Emphasis is on the relationship between design on the built environment and socio-cultural, technological, aesthetic, and environmental factors.

Offered spring semester.

EDES 3230. Design Communication III. 2 hours. Two 2-hour lab periods.

Prerequisite: EDES 2220.

Traditional and computer media and resource access or

material and cultural resource analysis, and land planning. Skill development in GIS, electronic communication, process and presentation graphics.

Offered fall semester.

EDES 4090/6090. Architectural Design. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 4060 or LAND 6020.

Major design determinants in architecture. Inquiry into structural, functional/programmatic, theoretical, and environmental issues will be focused on developing an understanding of the relationship between architecture and landscape.

Not offered on a regular basis.

EDES 4100/6100. Historic Preservation Design Studio. 4 hours. Two 4-hour lab periods.

An advanced design studio focused on contemporary preservation issues. Emphasis will be placed on new design and community planning.

Not offered on a regular basis.

EDES 4240. Design Communication IV. 2 hours. Two 2-hour lab periods.

Prerequisite: EDES 3230.

Advanced multimedia and desktop publishing techniques and their application to environmental design projects.

Offered spring semester.

EDES 4250/6250. Advanced Computer-Aided Design. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of computer-aided design software for the development of environmental design and land planning projects.

Not offered on a regular basis.

EDES 4260/6260. Computer Rendering and Animation. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of computer rendering and animation software for the visualization of site design and land planning projects.

Not offered on a regular basis.

EDES 4270/6270. Environmental Design Uses of Geographic Information Systems. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: EDES 3230 or EDES 6220.

Lecture/studio in the use of geographic information systems software for the development of environmental design and land planning projects.

Not offered on a regular basis.

EDES 4610/6610. Vernacular Architecture. 3 hours.

Vernacular or folk architecture around the world and through history. Emphasis will be on how built form is a response to natural/physical and socio-cultural determinants. Both anthropological and art historical approaches to the subject will be explored.

Not offered on a regular basis.

EDES 4620/6620. Evolution of American Architecture. 3 hours.

Prerequisite: (EDES 2510 and EDES 2520) or EDES 6510. History of American architecture from colonial times to World War II. Emphasis is on the development of both built form and the intellectual and social currents influencing that form.

Not offered on a regular basis.

EDES 4630/6630. The History and Theory of Twentieth-Century Architecture. 3 hours.

Prerequisite: EDES 2520 or permission of school. The major monuments and theories of world architecture from the early modern period to the present. Major monuments will be presented in slide lecture; theory in readings and discussions.

Not offered on a regular basis.

EDES 4640/6640. The History of Urban Planning. 3 hours.

Prerequisite: (EDES 2510 and EDES 2520) or EDES 6510 or permission of school.

Major movements and monuments in the history of urban planning. The first half of the course will cover the world from ancient times to the present; the second half will focus on America from colonial times to the present.

Not offered on a regular basis.

EDES 4650/6650. City Planning. 2 hours.

The study of urban places. Planning processes and regulatory tools and techniques used by urban communities to achieve community goals and objectives.

Not offered on a regular basis.

EDES 4660/6660. Environment and Behavior: Theory and Practice. 2 hours.

The interactions and relationships between people and their physical environments. Focuses on the social, behavioral, and cultural aspects of design.

Not offered on a regular basis.

EDES 4670/6670. History of Landscape Technology and Management. 2 hours.

Prerequisite: EDES 2520 or EDES 6510.

Technological influence upon attitudes toward nature and natural resources that result in a changed landscape.

Not offered on a regular basis.

EDES 4680/6680. Conservation of Culturally Significant Resources in Rural Areas. 2 hours.

Prerequisite: Junior standing.

The cultural evolution of rural landscapes in the United States. Exploration of approaches and methodologies used in identifying and protecting significant features, both natural and cultural, in a constantly changing environment.

Not offered on a regular basis.

EDES 4920/6920. Directed Study in Computer Application. 1-3 hours. Repeatable for maximum 9 hours credit. 1-3 lab periods of 2 hours per week.

Prerequisite: EDES 3230 or EDES 6220.

Supervised research into computer-generated visualizations as they may be applied in environmental design and land planning.

Not offered on a regular basis.

(EDHI) Higher Education

College of Education, Department of Higher Education

EDHI(HIST) 4900/6900. History of American Colleges and Universities. 3 hours.

Prerequisite: HIST 2111 and HIST 2112.

History of American colleges and universities from 1619 to the present. Student life, European antecedents, the nature of the university, the impact of religion, the rise of athletics, the culture of collegiate life, and the influence of society.

Offered on a regular basis.

(EDIT) Instructional Technology Education

College of Education, Department of Instructional Technology

EDIT 2000. Introduction to Computers for Teachers. 3 hours.

Not open to students with credit in EDIT 2010 or EDIT 2020.

The computer and its educational applications for preservice teachers. Computer-based education in the areas of instruction, text and data processing, multimedia, and telecommunications. Emphasis on integrating computer tools into class instruction.

Offered every year on a regular basis.

EDIT 2010. Basic Instructional Technology Competencies. 2 hours. One lecture and one 2-hour lab period.

Not open to students with credit in EDIT 2000 or EDIT 2020.

Introduces the use of a variety of resources in teaching. Design and creation of products for learning environments using various technologies.

Offered every year on a regular basis.

EDIT 2020. Teaching with Technology. 3 hours. Two lectures and two 1-hour lab periods.

Not open to students with credit in EDIT 2000 or EDIT 2010.

Focuses on creating teaching and learning environments using technology. Design and creation of products for learning environments will take place through numerous activities with various technologies. Activities anchored in a problem-centered context.

Offered every year on a regular basis.

EDIT 4170/6170. Instructional Design. 3 hours.

Systematic procedures for designing, developing, evaluating, and revising instruction to meet identified goals and objectives.

Offered every year on a regular basis.

EDIT 4180/6180. Instructional Development. 3 hours.

Prerequisite: EDIT 4170/6170.

Developing instructional materials for a defined context applying a learner-centered, systematic design philosophy. Working within a team environment while applying contemporary learning theories. Engaging in situational assessment, learner analysis, performance specification, test construction, strategies selection, materials design, and evaluation.

Offered every year on a regular basis.

EDIT 4500/6500. Educational Television Production. 3 hours.

Design, production, and use of digital and analog video. Laboratory experiences with studio and portable cameras; editing and other equipment suitable for school use.

Offered every year on a regular basis.

(EDMS) Middle School Education

College of Education, Department of Middle School Education

EDMS 4000. Special Problems in Middle School Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent study of issues related to middle school education.

Non-Traditional Format: Individual/special projects.

Offered fall, spring, and summer semesters.

EDMS 5020. Educating Young Adolescents. 3 hours.

Prerequisite: Permission of department.

The concept of a separate organization and program for young adolescents, types of curricular plans for the middle school, aspects of teaching in the middle school, and the organization and staff of the middle school. A supervised field experience is included.

Offered fall semester.

EDMS 5030. The Middle School Curriculum. 3 hours.

Prerequisite: EDMS 5020.

Curriculum planning, implementation, and evaluation for teaching middle school students. A supervised field experience is included.

Offered fall semester.

EDMS 5040. Teaching in the Middle School. 1-3 hours.

Repeatable for maximum 3 hours credit.

Prerequisite: EDMS 5030.

Various roles of middle school teachers, with emphasis

on classroom, team, school, and community issues.

Offered fall and spring semesters.

EDMS(EDEC) 5060. Service Learning. 3 hours.

History, rationale, research, methodology, and outcomes of service learning. Students will conceptualize, plan, and participate in a service learning project. Emphasis is on how service can be incorporated into curriculum with a primary focus on learning.

Not offered on a regular basis.

EDMS 5460. Student Teaching in the Middle School. 15 hours.

Prerequisite: EDMS 5030.

Full-time laboratory experience in a middle grade during which the student assumes major responsibility for instruction.

Non-Traditional Format: Student teaching/field based in schools.

Offered fall semester.

(EDUC) Education

College of Education

EDUC 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, readings, or projects under the direction of a faculty member.

Non-Traditional Format: Independent study under the direction of a faculty member.

Offered on a regular basis.

EDUC 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, readings, or projects under the direction of a faculty member.

Non-Traditional Format: Independent study under the direction of a faculty member.

Offered on a regular basis.

EDUC 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Independent research under the direction of a faculty member.

Offered on a regular basis.

(EETH) Environmental Ethics

College of Arts and Sciences

EETH 4000. Environmental Ethics Seminar. 1 hour.

One 2-hour lab period.

Prerequisite: Permission of department.

Seminars in environmental ethics. Topics range from animal rights/animal welfare to ecofeminism and deep ecology.

Offered fall and spring semesters.

EETH 4010. Undergraduate Research. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research project under the direction of a faculty member done independently of regularly scheduled classes. Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall and spring semesters.

EETH 4020/6020. Readings in Environmental Ethics. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Discussion of selected books and articles pertaining to environmental ethics.

Not offered on a regular basis.

EETH(AGRI) 4190/6190. Agricultural Ethics. 1 hour. One 2-hour lab period.

Ethical issues in agriculture. Topics include animal rights/animal welfare, agriculture as a business/agriculture as a way of life, sustainable agriculture, (bio)technology, migrant farm workers, foreign aid, world hunger, and related topics.

Offered fall and spring semesters.

(EETH)PHIL 4220/6220. Environmental Ethics. 3 hours.

Prerequisite: PHIL 2200 or permission of department.

Major professional and nonprofessional writings in the field of environmental ethics.

Offered fall semester.

(EETH)PHIL 4250/6250. Technology and Values. 3 hours.

Prerequisite: Permission of department.

Technology in its broadest human context, with emphasis on the mutual influence between means and ends and the impact of technology on shaping the beliefs and attitudes of a civilization. Includes alternative assessments of technology and illustrates with specific crucial issues of our time.

Offered spring semester of even-numbered years.

EETH(JURI) 5870/7870. Environmental Dispute Resolution. 2 hours.

Conflict management, anatomy of negotiation, planning and conduct of negotiations, and resolving multi-party environmental disputes.

Offered spring semester.

(EFND) Foundations of Education

College of Education, School of Teacher Education

EFND 2030. Foundations of Education. 3 hours.

Prerequisite: Sophomore standing.

Contemporary and historical issues in American education, including the nature and purpose of schooling, the

relationship between race, class, and gender and educational achievement, school reform, and the rights and responsibilities of teachers and students.

Offered fall, spring, and summer semesters.

(EHEC) Home Economics Education

College of Education, Department of Occupational Studies

EHEC 4350. Curriculum Planning in Home Economics Education. 3 hours.

Content identification, program organization, preparation of instructional objectives, guidelines for selection and development of instructional materials for home economics education.

Offered fall semester.

EHEC 5460. Student Teaching in Home Economics Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: EHEC 4350 and EOCS 4360/6360 and permission of department.

Full-time supervised student-teaching experience in a secondary home economics education program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall and spring semesters.

(EHSC) Environmental Health Science

College of Agricultural and Environmental Sciences, Department of Food Science and Technology

EHSC 2010. Orientation to Environmental Health. 1 hour.

Environmental health science, including environmental protection, industrial hygiene, toxicology, risk assessment, and public health.

Offered fall semester.

EHSC 3060. Introduction to Environmental Health Science. 3 hours.

The fundamentals of environmental health, covering environmental control agencies, elements of the environment suffering from pollution, environmental pollutants and their sources, effects of environmental pollution, and methods of pollution control.

Offered fall and spring semesters.

EHSC 3260. Shelter and Institutional Environments. 2 hours.

Prerequisite: EHSC 3060 and MIBO 3500.

Environmental health practice associated with housing and special institutional environments.

Offered fall semester.

Environmental Health Science

EHSC 3700. Special Problems in Environmental Health Science. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Research or intensive study in a specialized area of environmental health under the direction of a staff member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

EHSC 3800. Environmental Health Seminar. 1 hour.

Prerequisite: Permission of department.

Selected topics in Environmental Health. Papers to be presented by students.

Offered fall and spring semesters.

EHSC 3910. Internship in Environmental Health Science. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: EHSC 3060 and permission of department.

Practical work experience; familiarizes the student with various aspects of environmental health science.

Non-Traditional Format: Experiential education and training in a specialized area of environmental health science under the direction of a faculty member.

Offered fall, spring, and summer semesters.

EHSC 4080/6080. Environmental Air Quality. 2 hours.

Prerequisite: CHEM 2211 and CHEM 2211L.

Sources and control of community air pollution; effects of air pollutants on human health and the environment; regulatory and public policy issues.

Offered spring semester.

EHSC 4100/6100-4100L/6100L. Industrial Hygiene.

3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 2211 and CHEM 2211L.

The anticipation, recognition, evaluation, and control of those environmental factors, arising in or from the workplace, which can cause sickness, impaired health and well-being, or significant discomfort and inefficiency among workers or among community citizens.

Offered fall semester.

EHSC 4150/6150. Solid and Hazardous Waste Management. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and MATH 1113 and STAT 2000.

Regulatory, chemical, and engineering aspects of solid and hazardous waste management, including RCRA, CERCLA, landfill and incinerator design, pollutant transport and fate, and potential for human health impacts. Offered fall semester; offered spring semester of even-numbered years.

(EHSC)AAEC 4250. Environmental and Public Health Law. 3 hours.

Not open to students with credit in AAEC 4930/6930. Basic legal principles and procedures as they relate to environmental regulations and public health. Coverage of common law, torts, nuisances, regulatory standards,

and state and federal environmental laws. Delineation of significant constitutional and federal regulations that affect managerial decisions.

Offered spring semester.

(EHSC)FDST(MIBO) 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems.

Offered fall semester.

(EHSC)FDST(MIBO) 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations.

Offered spring semester.

EHSC 4350/6350-4350L/6350L. Environmental Chemistry. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: EHSC 4150/6150.

Chemical principles of environmental processes which result from natural or human-generated phenomena; air, water, and soil chemical reactions involving pollutants and wastes; measurement of pollutants in the environment.

Offered spring semester of odd-numbered years.

EHSC 4490/6490. Environmental Toxicology. 3 hours.

Prerequisite: CHEM 2211 and CHEM 2211L and (BIOL 1104-1104L or BIOL 1108-1108L).

Extent and significance of toxic agents in the environment, and the physical, chemical, and biological processes which determine their behavior, fate, and ultimate effect on human health.

Offered fall and spring semesters.

EHSC 4590/6590-4590L/6590L. Water and Wastewater. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Chemistry and microbial life of water and wastewater, domestic and industrial, with scrutiny of current treatment processes. Sampling methods will be demonstrated. Effects of different types of waste on microbial population of rivers and streams.

Offered spring semester.

EHSC 4610/6610. Water Pollution and Human Health. 3 hours.

Prerequisite: EHSC 3060.

Prerequisite or corequisite: CHEM 2211 and CHEM 2211L.

Human health issues related to water consumption and use, focusing on water contamination from municipal, industrial, and agricultural practices.
Offered fall semester.

(ELAN) Language Education

College of Education, Department of Language Education

ELAN 3110. Children's Literature and Oral Language. 3 hours.

Literary genres suitable for elementary school children. Includes issues of book selection, censorship, and responding to children's literature in a diverse society. Addresses the socially-constructed, dynamic nature of oral and written language and how to help children use and expand upon the language they bring to school. Offered fall and spring semesters.

ELAN 3460. Introduction to English Education. 3 hours.

Prerequisite: Permission of department.

Community work with adolescents (mentoring, tutoring, etc.), common readings in education, and interactions with professional educators. Hands-on experiences help English education majors decide if public school teaching of adolescents is a profession they want to pursue.

Non-Traditional Format: Discussion hour plus community service work.

Offered fall semester.

ELAN 3461. Issues in English Education. 3-9 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: ELAN 3460.

Community work with adolescents (mentoring, tutoring, etc.), common readings in education, and interactions with professional educators. English education majors build on individual and shared experiences and readings to examine issues of English education in public schools. They construct a portfolio of insights and experiences.

Non-Traditional Format: Discussion hour plus community service work.

Offered spring semester.

ELAN 4080/6080. Special Problems in Language Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Selected topics related to teaching language arts or a foreign language.

Non-Traditional Format: Independent study with faculty member.

Not offered on a regular basis.

ELAN 4120. Whole Language Teaching in Early Childhood Education. 3 hours.

Recent research and theory on oral and written language acquisition, development, and variation and the implications for classroom practices. Whole language instructional techniques for the development of written and oral language.

Offered fall and spring semesters.

ELAN 4400/6400. Teaching as Planning in Context. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Historical, political, economic, and social factors that influence how the language arts are taught, how schools operate, and how teachers function.

Not offered on a regular basis.

ELAN 4401/6401. Teaching as Collaborative Inquiry. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461.

Corequisite: ELAN 4400/6400 or ELAN 4410/6410 or ELAN 4470/6470.

Literacy research for practitioners including research design, methodology, data analysis and interpretation for questions about students as readers/writers/language users.

Offered fall semester.

ELAN 4410/6410. Adolescent Literature. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4470/6470.

Adolescent literature and its selection and use in the middle school and high school to promote engagement with literature and as a bridge to the classics.

Offered fall semester.

ELAN 4460/6460. Supervised Field Experience in English, Grades 7-12. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461 or permission of department.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Observation and work in public school English classrooms.

Offered fall semester.

ELAN 4462/6462. Student Teaching Seminar. 3 hours.

Prerequisite: ELAN 3460 or ELAN 3461 or ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Corequisite: ELAN 5460.

Issues of classroom teaching. Students plan for and examine their concurrent student teaching experience in light of research and theory, peers' experiences in other school settings, and their own teaching and learning histories.

Language Education

Non-Traditional Format: Intensive two-week planning seminar prior to student teaching and two-week debriefing seminar following student teaching. Ten weeks of two-hour weekly discussions concurrent with student teaching.

Offered spring semester.

ELAN 4470/6470. Guided Field Research. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470.

Supervised observation and participation in school settings.

Offered fall semester.

ELAN 4530. Foreign Language Curriculum and Methodology in the Elementary and Middle Schools. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4531.

Foundations of second language learning, curricular and materials design, and methods of teaching foreign languages in the elementary and middle schools.

Offered fall semester.

ELAN 4531. Foreign Language Curriculum and Methodology in the Secondary School. 3 hours.

Prerequisite: Permission of department.

Corequisite: ELAN 4530.

Curricular design of foreign languages and the techniques and strategies for teaching and evaluating language acquisition.

Offered fall semester.

ELAN 4630/6630. TESOL Methods and Materials. 3 hours.

Principles, methods, materials, and activities for the teaching of English to adult speakers of other languages.

Offered every year on a regular basis.

ELAN 5030. American Language and Cultural Studies for International Students. 3 hours.

Designed to help international students develop advanced English skills in understanding academic lectures, comprehending reading materials, speaking with grammatical accuracy and acceptable pronunciation, and writing for academic purposes.

Offered fall semester.

ELAN 5040. Language and Culture in the Classroom. 3 hours.

Exploration of topics on the relationship between language and culture and on pedagogical principles of multicultural education.

Offered fall semester.

ELAN 5200. Literature and Language Arts Across the Middle School Curriculum. 3 hours.

Uses writing as a teaching strategy in elementary and middle school content area classrooms. Students experience writing as a process to develop their writing

skills, plan content area assignments, evaluate writing, and understand how young people think about and learn content material through writing.

Offered spring semester.

ELAN 5210. Children's Literature and Oral Language in the Middle School. 3 hours.

Children's and adolescent literature appropriate for middle school students, including development of criteria for book selection, strategies for promoting enjoyment and appreciation, and methods for responding to diverse literature.

Offered fall semester.

ELAN 5220. Teaching Composition in the Middle School. 3 hours.

Strategies for building a literate learning community. Students write fiction, poetry, and information texts, engaging in as well as studying the pedagogy of writing development, conference, revision, assessment, and publishing.

Offered fall and spring semesters.

ELAN 5312/7312. Poetry in Elementary and Middle School Classrooms. 3 hours.

Poems and enrichment activities for use in elementary and middle school classes; ways of encouraging children to respond to published poetry, to understand poetic devices, and to write poetry.

Offered spring semester of even-numbered years; offered summer semester of odd-numbered years.

ELAN 5314/7314. Informational Literature in Elementary and Middle Schools. 3 hours.

Reading of informational literature and examining selection criteria and ways to integrate informational books into language arts and content area curricula appropriate for preschool through 8th grade.

Offered every year on a regular basis.

ELAN 5318/7318. Culturally Diverse Children's Literature. 3 hours.

Prerequisite: Undergraduate level only: ELAN 5210; Graduate level only: ELAN 6310 or ELAN 7310.

Children's fiction, poetry, and nonfiction literature dealing with the experiences of diverse cultures comprising American society. Development of criteria for evaluation and strategies for incorporating literature into the curriculum.

Offered every year on a regular basis.

ELAN 5332/7332. Drama in Elementary and Middle Grade Classrooms. 3 hours.

Integrating drama across the curriculum, including improvisational process drama, connecting to issues associated with children's literature, reading, writing, storytelling, and thematic oriented units of study with students in grades prekindergarten to middle school.

Offered summer semester.

ELAN 5390/7390. Problems of Literacy Teaching and Learning. 3 hours.

Issues related to preschool through 8th grade readers and writers with diverse learning paths, including learning disabilities, English as a second language, and histories of school failure. Effective teaching strategies include culturally-responsive teaching, student-generated curriculum and assessment links, interdisciplinary connections, and family involvement. Not offered on a regular basis.

ELAN 5460. Student Teaching in English Education. 9 hours.

Prerequisite: ELAN 4400/6400 or ELAN 4401/6401 or ELAN 4410/6410 or ELAN 4470/6470 or ELAN 4470/6470.

Corequisite: ELAN 4462/6462.

Student teaching English in the public school setting under the supervision of faculty members.

Non-Traditional Format: Student teaching in public school setting.

Offered spring semester.

ELAN 5550. Field-Based Practicum in Foreign Language Education. 3 hours.

Prerequisite: ELAN 4530 and ELAN 4531 and permission of department.

Corequisite: ELAN 5460.

Provides orientation to foreign language education in public school settings through class discussions, and on-site observations and experiences.

Non-Traditional Format: Field-based experience in public school foreign language classrooms (five-ten hours per week).

Offered spring semester.

ELAN 5560. Student Teaching in Foreign Language Education. 3-9 hours.

Prerequisite: ELAN 4530 and ELAN 4531 and permission of department.

Corequisite: ELAN 5550.

Student teaching in a public school under supervision of a faculty member.

Non-Traditional Format: Student teaching in public school setting.

Offered spring semester.

ELAN 5630. ESOL in P-12 Settings. 3 hours.

Foundations of second language learning, curricular and materials design, and methods of teaching non-native speakers of English in primary through secondary school settings.

Offered fall semester.

ELAN 5730/7730. First and Second Language Acquisition and Development. 3 hours.

Native and second language acquisition processes, with attention to regional, social, and functional variation in language and contrasts between English and other selected languages.

Offered fall and summer semesters.

(EMAT) Mathematics Education

College of Education, Department of Mathematics Education

EMAT 3400. Children's Mathematical Learning. 3 hours.

Prerequisite: MATH 1700 or permission of department.

Corequisite: EDEC(CHFD)4010.

Children's mathematical learning from pre-numerical stages through the acquisition of advanced numerical and spatial processes and operations. Research-based development of a theory of children's learning. Includes field component.

Offered fall and spring semesters.

EMAT 3410. Mathematics Teaching and Curriculum in PreK-5th Grade. 3 hours.

Prerequisite: EMAT 3400.

Corequisite: EDEC(CHFD)4020.

Mathematics teaching and curriculum in preK through 5th grade. Content and materials appropriate for preK through 5th grade mathematics curriculum is integrated with an analysis of mathematics teaching, including the use of technology. Includes a field component.

Offered fall and spring semesters.

EMAT 3450. School Practicum in Secondary Mathematics. 1-2 hours. Repeatable for maximum 2 hours credit.

A school-based planned practicum experience.

Non-Traditional Format: Part-time practicum in school. Offered fall and spring semesters.

EMAT 3500. Concepts in Secondary School Mathematics. 3 hours.

Prerequisite: MATH 2210, 2210L.

The basic concepts in the secondary mathematics curriculum, including concepts from algebra, functions, shape and space, and number systems.

Offered fall and spring semesters.

EMAT 4000/6000. Special Problems in Mathematics Education. 1-6 hours. Repeatable for maximum 9 hours credit.

Topics in mathematics education.

Non-Traditional Format: Independent study.

Offered fall, spring, and summer semesters.

EMAT 4200/6200. Technology in Teaching Elementary School Mathematics. 3 hours.

Prerequisite: Permission of department.

Use of technological tools in teaching elementary mathematics. Current computer software for mathematical explorations.

Offered summer semester of even-numbered years; offered spring semester of odd-numbered years.

Mathematics Education

EMAT 4360/6360. Teaching and Learning Secondary School Mathematics. 3 hours.
Prerequisite: EMAT 4680/6680 and permission of department.

Corequisite: EMAT 5360/7360.

Instructional strategies, classroom management, assessment techniques, lesson planning, multi-cultural and gender issues in mathematics education.

Offered fall and spring semesters.

EMAT 4500/6500. Connections in Secondary School Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210, 2210L)] or permission of department.

The secondary mathematics curriculum, with attention to applications of mathematics and to connections within mathematics and between mathematics and other subjects.

Offered fall and spring semesters.

EMAT 4550/6550. Contemporary School Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210, 2210L)] or permission of department.

The contemporary secondary and collegiate mathematics curriculum, with an emphasis on data handling, modeling, infinite processes, stochastic processes, and discrete mathematics.

Offered summer semester of even-numbered years; offered fall and spring semesters of odd-numbered years.

EMAT 4600/6600. Problem Solving in Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210, 2210L)] or permission of department.

Mathematical problems with emphasis on exploring various mathematical contexts, on posing and extending problems, and on communicating mathematical problems and solutions.

Offered fall and spring semesters of even-numbered years; offered summer semester of odd-numbered years.

EMAT 4650/6650. Historical and Cultural Foundations of Mathematics. 3 hours.

Prerequisite: [EMAT 3500 or (MATH 2210, 2210L)] or permission of department.

Development of mathematics across time, geography, and cultures with attention to the content of school mathematics.

Offered spring and summer semesters of even-numbered years; offered spring semester of odd-numbered years.

EMAT 4680/6680. Technology and Secondary School Mathematics. 3 hours.

Prerequisite: MATH 2210, 2210L.

Mathematical investigations appropriate to the secondary school using various technology tools.

Offered fall and spring semesters of even-numbered years; offered fall, spring, and summer semesters of odd-numbered years.

EMAT 4690/6690. Technology Enhanced Instruction in Secondary School Mathematics. 3 hours.

Prerequisite: MATH 2210, 2210L.

Use of technology in mathematics instruction and development of materials for mathematics instruction enhanced by technology.

Offered fall and summer semesters of even-numbered years; offered fall semester of odd-numbered years.

EMAT 4700/6700. Advanced Explorations with Technology in Mathematics Instruction. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MATH 2210, 2210L.

Use of technology in mathematics instruction, with an emphasis on the organization of materials for secondary mathematics courses.

Offered spring semester of odd-numbered years.

EMAT 4950/6950. Professional Seminar in Teaching Mathematics. 3 hours.

Prerequisite: EMAT 4360/6360.

Corequisite: EMAT 5460/7460.

Issues identified from the student teaching experience in mathematics with consideration of various avenues for professional development.

Offered fall and spring semesters.

EMAT 5280/7280. Teaching Number Systems in the Middle School. 3 hours.

Prerequisite: MATH 2200, 2200L and permission of department.

Corequisite: MATH 5020/7020.

Didactics of number systems for middle school mathematics. Teaching methods, curriculum materials, psychological factors for developing natural, integer, rational, and real number structures. Evaluation through the examination of mathematics content, with emphasis on the mathematical operations, models, and problem solving.

Offered fall semester.

EMAT 5290/7290. Teaching Geometry and Measurement in the Middle School. 3 hours.

Prerequisite: EMAT 5280/7280.

Corequisite: MATH 5030/7030.

Didactics of geometry for middle school mathematics. Teaching methods, curriculum materials, psychological factors for developing geometric and measurement concepts. Evaluation through the examination of mathematics content, with emphasis on statistics, probability, and mathematical applications.

Offered spring semester.

EMAT 5310/7310. Teaching Mathematics in the Middle School. 3 hours.

Prerequisite: EMAT 5290/7290.

Methods and materials for teaching mathematics in the middle school, with emphasis on integration of mathematical topics.

Offered fall semester.

EMAT 5320/7320. Teaching Algebra in the Middle School. 3 hours.

Prerequisite: EMAT 5290/7290.

Didactics of algebra and number theory for middle school mathematics. Teaching methods, curriculum materials, psychological factors for developing algebraic concepts.

Offered fall semester.

EMAT 5360/7360. Secondary School Mathematics Field Experience. 3 hours.

Prerequisite: EMAT 4680/6680 and permission of department.

Corequisite: EMAT 4360/6360.

Supervised observations, interviews, tutoring, teaching practice, and professional goal development.

Non-Traditional Format: Forty-five hours of field work per semester.

Offered fall and spring semesters.

EMAT 5460/7460. Student Teaching in Secondary School Mathematics. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: EMAT 4360/6360.

Corequisite: EMAT 4950/6950.

Supervised mathematics teaching in a secondary school.

Non-Traditional Format: In school for ten weeks, all day.

Offered spring semester.

(EMKT) Marketing Education

College of Education, Department of Occupational Studies

EMKT 4100/6100. Economic Foundations for Work-Based Education. 3 hours.

Prerequisite: EOCS 3010.

Economic principles and concepts of free-market economies in work-based education programs, with emphasis on instructional approaches.

Offered fall semester.

EMKT 4110/6110. Marketing and Business Foundations of Work-Based Education. 3 hours.

Prerequisite: EOCS 3010.

Business and marketing concepts, business environments, and managerial systems in work-based education, with emphasis on instructional strategies.

Offered spring semester.

EMKT 4120/6120. Human Resource Applications in Marketing Education. 3 hours.

Human relations, communications, mathematics, management, and career development in work-based education programs, with emphasis on instructional strategies.

Offered fall semester.

EMKT 4350. Curriculum Planning in Marketing Education. 3 hours.

Prerequisite: Permission of department.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for marketing education.

Offered fall semester.

EMKT 5460. Student Teaching in Marketing Education. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Full-time supervised student teaching experience in an existing marketing education program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall and spring semesters.

(EMUS) Music Education

College of Education

EMUS 4000. Special Problems in Music Education. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Specialized training in music education appropriate to the needs of the individual.

Offered fall, spring, and summer semesters.

EMUS 5460. Senior Practicum. 1-13 hours. Repeatable for maximum 13 hours credit.

Prerequisite: Permission of department.

Teaching assignment at appropriate level school with practicum/seminar component prior to field experience.

Non-Traditional Format: This course involves supervised student teaching at an approved site and, as such, involves various instructional modes that will require an eight-hour per day commitment from the student for the majority of the semester the course is taken.

Offered fall and spring semesters.

(ENGL) English

College of Arts and Sciences, Department of English

(ENGL)RGTE 0990. Review of Written English. 3 hours.

Prerequisite: Permission of department.

Review of usage, sentence structure, mechanics of writing, diction, paragraph structure, and theme development. A refresher course in the elements of composition. May not be used for graduation credit.

Non-Traditional Format: Most students will elect to complete requirements through directed study.

Offered fall, spring, and summer semesters.

ENGL 1030. Multicultural English Composition. 3 hours.

Not open to students with credit in ENGL 1102 or ENGL 1050H.

Prerequisite: Permission of department.

Themes on fiction, poetry, and drama using multicultural literature.

Offered fall, spring, and summer semesters.

ENGL 1050H. Composition and Literature (Honors). 3 hours.

Not open to students with credit in ENGL 1102 or ENGL 1030.

Prerequisite: ENGL 1101 and permission of Honors.

Close analysis of literary works as the basis of effective critical writing.

Offered fall and spring semesters.

ENGL 1060H. Composition and Multicultural Literature (Honors). 3 hours.

Not open to students with credit in ENGL 1102, ENGL 1030, or ENGL 1050H.

Prerequisite: ENGL 1101 and permission of Honors.

Close analysis of multicultural literary works as the basis of effective critical writing.

Offered on a regular basis.

ENGL 1101. English Composition I. 3 hours.

Expository themes on both general and literary topics developed by basic rhetorical methods.

Offered fall, spring, and summer semesters.

ENGL 1102. English Composition II. 3 hours.

Not open to students with credit in ENGL 1030 or ENGL 1050H.

Prerequisite: Permission of department.

Themes on fiction, poetry, and drama.

Offered fall, spring, and summer semesters.

ENGL 2310. English Literature from the Beginnings to 1700. 3 hours.

Not open to students with credit in ENGL 2350H.

Prerequisite: ENGL 1102 or ENGL 1030.

Writers typically include the *Beowulf* poet, *Gawain* poet, Chaucer, Spenser, Sidney, Marlowe, Donne, Jonson, Shakespeare, and Milton.

Offered fall, spring, and summer semesters.

ENGL 2320. English Literature from 1700 to the Present. 3 hours.

Not open to students with credit in ENGL 2360H.

Prerequisite: ENGL 1102 or ENGL 1030.

Writers typically include Pope, Swift, Johnson, Blake, Wordsworth, Coleridge, Keats, Tennyson, Arnold, Browning, one or two nineteenth-century novelists, Yeats, Woolf, and Joyce.

Offered fall, spring, and summer semesters.

ENGL 2330. American Literature from the Beginnings to 1865. 3 hours.

Not open to students with credit in ENGL 2370H.

Prerequisite: ENGL 1102 or ENGL 1030.

Significant work by writers in America from the seventeenth-century colonists through the Revolution to the Civil War. Writers may include Anne Bradstreet, Benjamin Franklin, Washington Irving, Nathaniel Hawthorne, Ralph Waldo Emerson, Frederick Douglass, Herman Melville, Harriet Beecher Stowe, Emily Dickinson.

Offered fall, spring, and summer semesters.

ENGL 2340. American Literature from 1865 to the Present. 3 hours.

Not open to students with credit in ENGL 2380H.

Prerequisite: ENGL 1102 or ENGL 1030.

Significant work by American writers between the end of the Civil War and the present. Writers may include Mark Twain, Henry James, Edith Wharton, William Faulkner, Langston Hughes, T.S. Eliot, Zora Neale Hurston, Richard Wright, Elizabeth Bishop, Saul Bellow, and Adrienne Rich.

Offered fall, spring, and summer semesters.

ENGL 2350H. English Literature from the Beginnings to 1700 (Honors). 3 hours.

Not open to students with credit in ENGL 2310.

Prerequisite: (ENGL 1102 or ENGL 1030) and permission of Honors.

Writers typically include the *Beowulf* poet, *Gawain* poet, Chaucer, Spenser, Sidney, Marlowe, Donne, Jonson, Shakespeare, and Milton.

Offered fall and spring semesters.

ENGL 2360H. English Literature from 1700 to the Present (Honors). 3 hours.

Not open to students with credit in ENGL 2320.

Prerequisite: (ENGL 1102 or ENGL 1030) and permission of Honors.

Writers typically include Pope, Swift, Johnson, Blake, Wordsworth, Coleridge, Keats, Tennyson, Arnold, Browning, one or two nineteenth-century novelists, Yeats, Woolf, and Joyce.

Offered fall and spring semesters.

ENGL 2370H. American Literature from the Beginnings to 1865 (Honors). 3 hours.

Not open to students with credit in ENGL 2330.

Prerequisite: (ENGL 1102 or ENGL 1030) and permission of Honors.

Significant work by writers in America from the seventeenth-century colonists through the Revolution to the Civil War, including Anne Bradstreet, Benjamin Franklin, Washington Irving, Nathaniel Hawthorne, Ralph Waldo Emerson, Frederick Douglass, Herman Melville, Harriet Beecher Stowe, and Emily Dickinson.

Offered fall and spring semesters.

ENGL 2380H. American Literature from 1865 to the Present (Honors). 3 hours.

Not open to students with credit in ENGL 2340.

Prerequisite: (ENGL 1102 or ENGL 1030) and permission of Honors.

Significant work by American writers between the end of the Civil War and the present including Mark Twain, Henry James, Edith Wharton, William Faulkner, Langston Hughes, T.S. Eliot, Zora Neale Hurston, Richard Wright, Elizabeth Bishop, Saul Bellow, and Adrienne Rich.

Offered fall and spring semesters.

ENGL 2390H. Multicultural Literature in America (Honors). 3 hours.

Not open to students with credit in ENGL 2400.

Prerequisite: (ENGL 1102 or ENGL 1030) and permission of Honors.

Important writers and movements in the mosaic of American culture and literature with special attention to African American, Native American, Hispanic American, and Asian American literatures.

Offered fall and spring semesters.

ENGL 2400. Multicultural Literature in America. 3 hours.

Not open to students with credit in ENGL 2390H.

Prerequisite: ENGL 1102 or ENGL 1030.

Important writers and movements in the mosaic of American culture and literature with special attention to African American, Native American, Hispanic American, and Asian American literatures.

Offered fall, spring, and summer semesters.

ENGL 3000. Introduction to English Studies. 3 hours.

Prerequisite: Permission of department.

The skills and knowledge necessary for successful pursuit of a degree in English: close reading, critical writing, acquaintance with current theoretical issues, and familiarity with bibliographic and electronic resources. Required of all English majors.

Offered every year on a regular basis.

ENGL 3010. Introduction to Folklore. 3 hours.

Prerequisite: Permission of department.

The discipline of folklore, its aims, methods, and subject matter. The major genres of verbal folklore—folk speech, proverbs, riddles, rhymes, legends, folktales, ballads, and folksong—along with folk customs, festivals, and material culture.

Offered every year on a regular basis.

(ENGL)LING 3020. Language Variation. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

Theory and assessment of regional and social language variation within one language, including the relationship of variation to language change. Historical and

present-day illustrations come primarily from English, with consideration of the significance of language variation in our modern social context.

Offered every year on a regular basis.

ENGL(LING) 3030. Introduction to the English Language. 3 hours.

Prerequisite: ENGL 1102 or ENGL 1030.

The history, structure, and modern varieties of the English language.

Offered on a regular basis.

ENGL 3050. Introduction to Poetry. 3 hours.

Prerequisite: Permission of department.

Formal and thematic traditions of poetry in English, with emphasis on techniques of reading and of writing critical essays.

Offered every year on a regular basis.

(ENGL)LING 3150. Generative Syntax. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

Techniques and formalisms for analyzing syntactic phenomena of human languages within the framework of generative grammar. Examples will be drawn primarily from English.

Offered every year on a regular basis.

ENGL(AFAM) 3230. Development of African American Literature. 3 hours.

Prerequisite: Permission of department.

African American literature since 1773, particularly 1830 to the present: Frederick Douglass, Harriet Jacobs, Zora Neale Hurston, Langston Hughes, Richard Wright, Dorothy West, Ralph Ellison, James Baldwin, Alice Childress, Lorraine Hansberry, Amiri Baraka, Toni Morrison, Alice Walker, and August Wilson, including diverse voices rooted in the folk origins for literary forms.

Offered every year on a regular basis.

ENGL 3300. Women in Literature. 3 hours.

Prerequisite: Permission of department.

Reading and analysis of works in British and American literature by and about women.

Offered every year on a regular basis.

ENGL 3590. Technical and Professional Communication. 3 hours.

Prerequisite: ENGL 1102 or ENGL 1030.

Writing in the professional domains, with an emphasis on research methods, clear and accurate presentation of ideas and data, and computer-mediated communication.

Offered every year on a regular basis.

ENGL 3600. Advanced Composition. 3 hours.

Prerequisite: ENGL 1102 or ENGL 1030.

Writing as a process, with an emphasis on the conventions of discourse situations, invention, revision, editorial skills, and document design.

Offered every year on a regular basis.

English

ENGL 3610. Introduction to Fiction. 3 hours.

Prerequisite: Permission of department.

Short fiction in English, with some attention to historical development of the genre, narrative techniques, and the development of critical strategies for reading and writing.

Offered every year on a regular basis.

ENGL 3650. Introduction to Drama. 3 hours.

Prerequisite: Permission of department.

Drama in English. Focus may be historical development of the genre, representative themes, the relation between theory and practice, or the relation between text and performance. The course will include critical writing.

Offered every year on a regular basis.

ENGL 3800. Introduction to Creative Writing. 3 hours.

Prerequisite: ENGL 1102 or ENGL 1030.

Elements of writing poetry, fiction, and creative non-fiction through selected readings and discussion of student writing.

Offered every year on a regular basis.

ENGL(LING) 4000/6000. History of the English Language. 3 hours.

Prerequisite: Permission of department.

The development of present English through the stages of Old English, Middle English, and early Modern English. Study of elementary phonetics, phonemics, sound change, and dialect variation.

Offered spring semester.

ENGL(LING) 4010/6010. American English. 3 hours.

Prerequisite: Permission of department.

The history, present status, and future prospects of American English, including standards and internal variation.

Not offered on a regular basis.

ENGL(LING) 4060/6060. Old English. 3 hours.

Prerequisite: Permission of department.

The language and literature of England before the Norman Conquest, with reading of selected texts.

Offered fall semester.

ENGL(LING) 4110/6110. English Grammar. 3 hours.

Prerequisite: Permission of department.

English grammar in the scholarly tradition of Curme and Jespersen.

Offered spring semester.

ENGL(LING) 4170/6170. Second Language Acquisition. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Linguistic theories of second language acquisition, with emphasis on the acquisition of English. Topics include order of acquisition, sociocultural factors with linguistic bases, and neurolinguistic models.

Not offered on a regular basis.

ENGL(LING) 4180/6180. ESL Error Analysis. 3 hours.

Prerequisite: ENGL(LING) 4110/6110 or permission of department.

Psycholinguistic theory applied to problems in second language learning, and the prediction of language behavior through the use of contrastive analysis.

Not offered on a regular basis.

ENGL 4190. Topics in the English Language. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4210/6210. Old English Literature. 3 hours.

Prerequisite: ENGL(LING) 4060/6060 or permission of department.

Prose and poetry of the Old English period, exclusive of *Beowulf*, with emphasis on poetry. Works will be read in Old English, with supplementary translations.

Offered spring semester of even-numbered years.

ENGL 4220/6220. Beowulf. 3 hours.

Prerequisite: ENGL(LING) 4060/6060 or permission of department.

The poem in the original Old English, with attention to important critical studies.

Offered fall semester of even-numbered years.

ENGL 4230. Medieval Literature. 3 hours.

Prerequisite: Permission of department.

Masterpieces of medieval literature, exclusive of Chaucer. Some works will be read in Modern English translation.

Offered every year on a regular basis.

ENGL 4240/6240. Chaucer. 3 hours.

Prerequisite: Permission of department.

Canterbury Tales, *Troilus and Criseyde*, and minor poems.

Offered spring semester.

ENGL 4290. Topics in Medieval Literature. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4300/6300. Elizabethan Poetry. 3 hours.

Prerequisite: Permission of department.

Poetry of the earlier English Renaissance, such as works by Wyatt, Surrey, Sidney, Spenser, and Marlowe, and the sonnets of Shakespeare.

Offered fall semester of even-numbered years.

ENGL 4320/6320. Shakespeare: Part I. 3 hours.

Prerequisite: Permission of department.

The early plays of Shakespeare.

Offered fall semester.

ENGL 4330/6330. Shakespeare: Part II. 3 hours.

Prerequisite: Permission of department.

The later plays of Shakespeare.

Offered spring semester.

ENGL 4340/6340. Renaissance Drama. 3 hours.

Prerequisite: Permission of department.

English drama from 1576 to 1642, exclusive of Shakespeare, emphasizing dramatists such as Marlowe, Jonson, Webster, and Middleton.

Offered spring semester of even-numbered years.

ENGL 4350/6350. Seventeenth-Century Poetry. 3 hours.

Prerequisite: Permission of department.

Major English poets of the period, such as Donne, Jonson, Herbert, and Marvell.

Offered fall semester of even-numbered years.

ENGL 4360. Renaissance Prose. 3 hours.

Prerequisite: Permission of department.

Prose of the sixteenth and seventeenth centuries, such as works by More, Sidney, Bacon, Donne, Browne, and Bunyan.

Offered every year on a regular basis.

ENGL 4370. Milton. 3 hours.

Prerequisite: Permission of department.

The works and times of John Milton.

Offered every year on a regular basis.

ENGL 4390. Topics in Renaissance Literature. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4400/6400. Restoration and Eighteenth-Century English Drama. 3 hours.

Prerequisite: Permission of department.

Outstanding dramatists of the period: Dryden, Wycherley, Addison, Goldsmith, Sheridan, and others.

Offered spring semester of even-numbered years.

ENGL 4420/6420. Early Eighteenth-Century Prose and Poetry. 3 hours.

Prerequisite: Permission of department.

Poetry and prose of the earlier eighteenth century, emphasizing Addison, Steele, Defoe, Swift, and Pope.

Offered spring semester of odd-numbered years.

ENGL 4430. The Eighteenth-Century English Novel. 3 hours.

Prerequisite: Permission of department.

The English novel from Defoe to 1800, including novels by Richardson, Fielding, Smollett, and Sterne, the Gothic novel, and the novel of purpose.

Offered every year on a regular basis.

ENGL 4440/6440. The Age of Johnson. 3 hours.

Prerequisite: Permission of department.

English literature of the late eighteenth century, emphasizing Johnson, Boswell, and their group.

Offered fall semester of odd-numbered years.

ENGL 4490. Topics in Eighteenth-Century Literature. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4500. Romantic Literature. 3 hours.

Prerequisite: Permission of department.

British literature, 1785-1832. An introduction to genres, themes, and contexts of the Romantic period. Authors studied may include Blake, Wordsworth, Coleridge, Byron, Keats, Mary and Percy Shelley.

Offered every year on a regular basis.

ENGL 4520. The Nineteenth-Century British Novel. 3 hours.

Prerequisite: Permission of department.

The development of the British novel in the nineteenth century.

Offered every year on a regular basis.

ENGL 4530. Victorian Literature. 3 hours.

Prerequisite: Permission of department.

British literature from the first Reform Bill (1832) to the death of Queen Victoria (1901), with emphasis on the poetry and non-fiction prose of writers such as Tennyson, Elizabeth and Robert Browning, Arnold, Carlyle, Mill, Ruskin, and Christina and Dante Gabriel Rossetti.

Offered every year on a regular basis.

ENGL 4590. Topics in Nineteenth-Century British Literature. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL(AFAM) 4620. African American Poetry. 3 hours.

Prerequisite: Permission of department.

African American poetry from the colonial period to the present, including slave and folk songs of the mid-nineteenth century, the Harlem Renaissance of the 1920's, and contemporary poetry. Emphasis on such figures as Langston Hughes, Margaret Walker, Gwendolyn Brooks, Sonia Sanchez, Amiri Baraka, and others.

Offered every year on a regular basis.

ENGL(AFAM)4630. African American Fiction. 3 hours.
Prerequisite: Permission of department.
Important African American stories and novels from the nineteenth and twentieth centuries, including works by such authors as Frances Harper, Jean Toomer, Ralph Ellison, James Baldwin, Alice Walker, and Toni Morrison.

Offered every year on a regular basis.

ENGL 4640. Film as Literature. 3 hours.
Prerequisite: Permission of department.
The interpretation of films, with emphasis on the relationships between motion pictures and British and American literature.

Offered every year on a regular basis.

ENGL 4650. Modern Drama. 3 hours.
Prerequisite: Permission of department.
The drama of Europe and America from the realism of Ibsen and Strindberg to the present.

Offered every year on a regular basis.

ENGL 4660. Twentieth-Century British Poetry. 3 hours.
Prerequisite: Permission of department.
British poetry since the 1890's.

Offered every year on a regular basis.

ENGL 4670. The Twentieth-Century British Novel. 3 hours.
Prerequisite: Permission of department.
Fiction of such representative British novelists of the twentieth century as Bowen, Conrad, Forster, Joyce, Lawrence, Waugh, Woolf, and Greene.

Offered every year on a regular basis.

ENGL 4680. Modern Irish Literature. 3 hours.
Prerequisite: Permission of department.
Fiction, poetry, and drama of the Irish Renaissance and after.

Offered every year on a regular basis.

ENGL 4690. Topics in Twentieth-Century British Literature. 3 hours.
Prerequisite: Permission of department.
A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4700. People of Paradox: American Colonial Voices. 3 hours.
Prerequisite: Permission of department.
The literary engagement with cultural pluralism in Colonial America. Writers may include Bradford, Mather, Bradstreet, Taylor, Cooke, Rowlandson, Byrd, Jefferson, Franklin, Brown, and Irving.

Offered every year on a regular basis.

ENGL 4710. Emancipated Imagination: American Renaissance. 3 hours.
Prerequisite: Permission of department.
American poetry, fiction, and prose written between

1820 and 1865. Writers may include Cooper, Poe, Caroline Kirkland, Emerson, Thoreau, Hawthorne, Stowe, Harriet Jacobs, Douglass, Melville, Whitman, and Dickinson.

Offered every year on a regular basis.

ENGL 4720. American Realism and Naturalism. 3 hours.
Prerequisite: Permission of department.
Regionalism, realism, and naturalism from 1865 to 1918 with attention to the themes of ethical conflict, determinism, urbanization, the New Woman, and the contributions of ethnic minorities. Writers may include Twain, James, Wharton, Jewett, Dunbar-Nelson, Zitkala-Sa, Chopin, Chesnutt, Crane, Howells, Dreiser, and Sui Sin Far.

Offered every year on a regular basis.

ENGL 4730. The American Novel to 1900. 3 hours.
Prerequisite: Permission of department.
The growth of the novel in America from its inception in the Romantic to the development of the Realistic novel. Writers may include Cooper, Hawthorne, Melville, Twain, Simms, James, Howells, Stowe, Chesnutt, Dreiser, Norris, and Crane.

Offered every year on a regular basis.

ENGL 4740. Southern Literature. 3 hours.
Prerequisite: Permission of department.
The literature of the South from its roots through the modern renaissance. Writers may include Byrd, Cooke, Longstreet, Simms, Poe, Timrod, Lanier, Chopin, Twain, the Agrarians, Toomer, Roberts, Faulkner, Hurston, Welty, Porter, O'Connor, Wolfe, Percy, Crews, Berry, Kenan, Tyler, Dickey, Chappell, Alice Walker, and McCarthy.

Offered every year on a regular basis.

ENGL 4750. American Modernism. 3 hours.
Prerequisite: Permission of department.
The fiction, poetry, drama, and non-fiction prose that expresses the literary experimentation and social transformations of the period from 1918 to 1960. Writers may include Eliot, Pound, Stein, Fitzgerald, Hemingway, Faulkner, Toomer, Miller, O'Neill, Williams, Larsen, Steinbeck, Salinger, and O'Connor.

Offered every year on a regular basis.

ENGL 4760. Contemporary American Literature. 3 hours.
Prerequisite: Permission of department.
Various aspects of American fiction, poetry, drama, or non-fiction prose since 1960. The emphasis will vary from semester to semester following new developments in literature.

Offered every year on a regular basis.

ENGL 4770. Twentieth-Century American Poetry. 3 hours.
Prerequisite: Permission of department.
Ideas and forms in American poetry in the twentieth

century. Writers may include Eliot, Pound, H.D., Stein, Stevens, Rich, Sexton, Roethke, Harjo, Lorde, Perlman, Howe, Ashbery, Lowell, Moore, Williams, and Frost. Offered every year on a regular basis.

ENGL 4780. Twentieth-Century American Novel. 3 hours.

Prerequisite: Permission of department.

The development of the American novel from Naturalism through Modernism and Post-Modernism. Writers may include Cather, Hemingway, Fitzgerald, Wright, Steinbeck, Faulkner, Porter, O'Connor, Ellison, Heller, Morrison, and Percy.

Offered every year on a regular basis.

ENGL 4790. Topics in American Literature. 3 hours.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4800. Advanced Creative Writing. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: ENGL 3800 or permission of department.

Advanced instruction in writing. Focus, which will vary with professor and semester, may be fiction, poetry, fiction and non-fiction, or all genres.

Offered every year on a regular basis.

ENGL 4820. Literary Theory. 3 hours.

Prerequisite: Permission of department.

Representative texts from Aristotle to Derrida and beyond, exemplifying a range of contemporary critical approaches and providing a historical context for current theoretical debates.

Offered every year on a regular basis.

ENGL 4830. Advanced Studies in Writing. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: ENGL 3590 or ENGL 3600 or permission of department.

Advanced study of writing as process and product, focusing on particular discourse situations or kinds of texts. Topics might typically be advanced technical communication, academic writing for literary scholars, or text and hypertext.

Offered every year on a regular basis.

ENGL 4850. Rhetoric, Literature, and Textuality. 3 hours.

Prerequisite: Permission of department.

The relationship between rhetoric and the practice of writing, both literary and non-literary; from classical to contemporary theories of rhetoric (especially the role of writing in each theory) and the practical analysis of texts.

Offered every year on a regular basis.

ENGL 4860. Multicultural Topics in American Literature. 3 hours.

Prerequisite: Permission of department.

Topics in multicultural studies, with primary focus on literature by members of one or more traditionally marginalized cultural groups within the United States and with attention to historical context and theoretical aspects.

Offered every year on a regular basis.

ENGL 4870. Folklore Studies. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

One or more folk groups, folklore genres, or topics concerning folklore.

Offered every year on a regular basis.

ENGL(AFAM) 4880. Topics in African American Literature. 3 hours.

Prerequisite: Permission of department.

Selected topics in African American literature such as African American autobiography, Harlem Renaissance, Gwendolyn Brooks and Richard Wright, and Black American literature and aesthetics.

Offered every year on a regular basis.

ENGL 4890. Topics in Criticism and Culture. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

A special topic not otherwise offered in the English curriculum. Topics and instructors vary from semester to semester.

Offered every year on a regular basis.

ENGL 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ENGL 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project leader.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ENGL 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ENGL 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall and spring semesters.

(ENGR) Engineering

College of Agricultural and Environmental Sciences, Department of Biological and Agricultural Engineering

ENGR 1020. Surveying. 2 hours. One 4-hour lab period.
Prerequisite: MATH 1113.

Surveying methods, instruments, and computations related to field problems in distance measuring, leveling, directions, curves, and land surveying. Topographic mapping techniques will be emphasized. Not for credit toward an engineering major.
Offered fall and summer semesters.

ENGR 1120. Engineering Graphics. 2 hours. Two 2-hour lab periods.

Standards and techniques for engineering drawings. Orthographic and isometric drawings through descriptive geometry. Computer graphics using AutoCAD software.

Offered fall, spring, and summer semesters.

ENGR 1140. Computational Engineering Methods. 2 hours.

Prerequisite: MATH 2210, 2210L.

Computer programming and matrix techniques used in the analysis of engineering problems
Offered on a regular basis.

ENGR 1920. Freshman Engineering. 1 hour. One 2-hour lab period.

Prerequisite: MATH 2200, 2200L.

Engineering design will be reviewed and practiced through the use of a term project. The engineering discipline will be introduced through speakers and case studies.

Offered spring semester.

ENGR 2110. Engineering Decision Making. 3 hours.

Prerequisite: MATH 2210, 2210L.

Economics, finance, and computer modelling are applied to engineering decisions

Offered fall and summer semesters.

ENGR 2120. Engineering Statics. 3 hours.

Prerequisite: PHYS 1211-1211L.

Corequisite: MATH 2500 and ENGR 1120.

Two and three dimensional force systems, equilibrium, rigid structures, centroids, friction, and area moments of inertia.

Offered fall and spring semesters.

ENGR 2130. Dynamics. 3 hours.

Prerequisite: ENGR 2120.

Particles and rigid bodies that are moving with respect to a reference system. Kinematics deals with motion in terms of displacement, velocity, and acceleration. Kinetics includes the effect of forces on particles and bodies.

Offered spring semester.

ENGR 2140. Strength of Materials. 3 hours.

Prerequisite: ENGR 2120.

Elements of stress analysis, resistance, and design as applied to engineering materials and structures.

Offered fall and spring semesters.

ENGR 2150. Fluid Mechanics. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2120 and MATH 2700.

Elements and engineering applications of the laws of fluid behavior to evaluate the forces and energies generated by fluids at rest and in motion.

Offered fall and spring semesters.

ENGR 2170. Electrical Circuits. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MATH 2700 and PHYS 1212-1212L.

Circuit element, circuit models, and techniques for circuit analysis. The course emphasizes the application of Kirchhoff's laws in determining the transient and steady state response of circuits.

Offered fall and spring semesters.

ENGR 2500. Introduction to Biological Engineering. 3 hours.

Prerequisite: BIOL 1108-1108L and PHYS 1212-1212L.

Corequisite: CHEM 2100 and CHEM 2100L and MATH 2700.

Biological and engineering principles are utilized to produce practical products, processes, or systems that serve the needs of society.

Offered spring semester.

ENGR 2920. Engineering Design Methodology. 2 hours.

Prerequisite: PHYS 1211-1211L and MATH 2500 and ENGR 1920.

Corequisite: ENGR 2120.

Design methodology will be taught and practiced through use of term projects. Students will learn QFD for problem definition, conceptual design techniques and analysis procedures for detailed design.

Offered spring semester.

ENGR 3050. Soil and Water Resource Conservation. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: [MATH 1113 and PHYS 1111-1111L and CHEM 1212 and CHEM 1212L and (CRSS 3050-3050L or CRSS(FORS) 3060-3060L)] or permission of department.

The science of hydrology and presentation of methods for management of runoff, erosion, and associated water quality issues. Not for credit toward an engineering major.

Offered every year on a regular basis.

ENGR 3070. Turf and Landscape Irrigation System. 2 hours.

Prerequisite: (BIOL 1107-1107L or BTNY 1210-1210L) and MATH 1113.

Engineering technology involved in component selection, installation, and operation of turfgrass and landscape irrigation systems. Not for credit toward an engineering major.
Offered spring semester.

ENGR 3120. Engineering Measurements. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: MATH 1113.

Methods, instrumentation, and computations related to leveling, distance measuring, direction determination, curve layouts, and land surveying, with additional emphasis on Global Positioning and Geographic Information Systems.
Offered spring semester.

ENGR 3140. Thermodynamics. 2 hours.

Prerequisite: MATH 2500 and PHYS 1212-1212L.

The science of energy analysis from an engineering perspective. Focus on forms of energy, transformations of energy, and energy flows. Study applications in biological and traditional engineering systems.
Offered fall and spring semesters.

ENGR 3150. Heat Transfer. 3 hours.

Prerequisite: MATH 2700.

Theory of heat transmission by conduction, convection, and radiation. The solution of steady and unsteady state engineering problems involving heat transfer.
Offered fall semester.

ENGR 3210. Electrical Machines and Power Distribution. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2170.

DC and AC motors and generators. The design and analysis of electrical power distribution systems.
Offered spring semester.

ENGR 3270. Electronics I. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2170.

Diodes, transistors, and operational amplifiers.
Offered fall semester.

ENGR 3300. Mechanism Design I. 3 hours.

Prerequisite: ENGR 2130 and ENGR 2140.

Basic mechanical parts, kinematic analysis of mechanisms, application of static and fatigue failure theories, dimensioning and tolerancing, material selection, basic manufacturing processes.
Offered fall semester.

ENGR 3410. Introduction to Natural Resource Engineering. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: ENGR 2150 or permission of department. Engineering hydrology, soil erosion, channel design, flow measurement techniques, engineered containment structures, water distribution and non-point water quality.
Offered fall semester.

ENGR 3420. Introduction to Soil Mechanics. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2120.

Topics including soil shear strength, shallow foundations, slope stability, lateral earth pressure and soil compaction, design of shallow foundations for agricultural structure, retaining walls, and engineered slopes will be discussed.
Offered spring semester.

ENGR 3440. Water Management. 3 hours.

Prerequisite: ENGR 3410.

Science and design methods associated with managing water on a field scale. Topics will include the management of excess and deficient surface and ground water conditions that may impact activities such as agricultural production, construction, bioremediation, and environmental restoration.
Offered spring semester.

ENGR 3520. Mass Transport and Rate Phenomena. 3 hours.

Prerequisite: ENGR 2150 and ENGR 2500 and MATH 2700.

Mass transport and rate phenomena in the analysis of engineering problems in biological systems.
Offered fall semester.

ENGR 3540. Physical Unit Operations. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2150 and ENGR 3150.

Physical unit operations for processing plants. Systems for handling liquids or gases include pump or fan driven systems. Physical separation of solids in liquid or gas medium. Psychometrics for process environment control. Water or solvent transport from materials.
Offered every year on a regular basis.

ENGR 3610. Structural Design. 3 hours.

Prerequisite: ENGR 2140.

Deals with the relationships between loads and deflections which occur in structures as well as designing with wood and concrete.
Offered fall semester.

ENGR 3720. Engineering Physiology. 3 hours.

Prerequisite: ENGR 2120 and ENGR 3520 and VPHY 3100.

Topics will be discussed which identify physical features and engineering principles governing the behavior of organisms.
Offered fall semester.

ENGR 3900. Cooperative Work Experience. 1 hour. Repeatable for maximum 8 hours credit.

Coordinated and planned work experience with cooperating industries or agencies.

Non-Traditional Format: Student will be away from campus in a cooperative work experience with an approved employer.

Offered fall, spring, and summer semesters.

Engineering

ENGR 4210/6210. Linear Systems. 3 hours.

Prerequisite: ENGR 2170.

Time and frequency domain analysis of linear systems, convolution, fourier series, and fourier transforms with applications.

Offered spring semester.

ENGR 4220/6220. Feedback Control Systems. 3

hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 4210/6210.

The analysis and design of continuous and discrete time, and linear feedback control systems.

Offered fall semester.

ENGR 4230/6230. Sensors and Transducers. 3

hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2170.

Fundamentals of the sensing process, transducers and their environments and the measurement problem. Transducer types and modeling. Displacement, motion, pressure, fluid-flow, temperature measurements.

Offered fall semester.

ENGR 4240. Introduction to Microcontrollers. 3

hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 2170 and ENGR 4230/6230.

Microcontrollers in engineering monitoring and control applications. The MC68HCII is used to demonstrate 1) the use of the MC as an integral part of modern electronic and electromechanical systems 2) design techniques for interfacing MC's to digital input/output devices and analog transducers 3) development tools 4) real-time control.

Offered spring semester.

ENGR 4250/6250. Advanced Microcontrollers. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3270 and ENGR 4240.

Using the MC68HCII to solve practical engineering monitoring and control problems. A project-oriented course.

Offered fall semester.

ENGR 4270. Electronics II. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3270.

Linear large-scale integrated circuits, power components, active filters and communication circuits.

Offered spring semester.

ENGR 4280/6280. Measurement Automation and Control. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 1140 and ENGR 2170.

The analysis, design, and programming of systems used for automatic data acquisition, measurement, and control.

Offered spring semester.

ENGR 4300. Mechanism Design II. 2 hours.

Prerequisite: ENGR 3300.

Design and selection of machine elements and components.

Offered spring semester.

ENGR 4330. Plastics and Composites. 3 hours.

Prerequisite: ENGR 2140.

Material properties of plastic and composite materials and the design of these type members for structural and mechanical uses.

Offered spring semester of even-numbered years.

ENGR 4340. Machine Hydraulics. 3 hours.

Prerequisite: ENGR 2150.

Fundamental understanding of power hydraulic components and hydraulic system design.

Offered fall semester.

ENGR 4350/6350. Introduction to Finite Element Analysis. 3 hours.

Prerequisite: ENGR 2140 and MATH 2700.

Fundamental finite element theory for the solution of engineering problems. Geometrical modelling techniques, element selection, and tests for accuracy. Emphasis on problems in structural mechanics and elasticity.

Offered fall semester.

ENGR 4360/6360. Advanced Topics in CAD/CAM. 3 hours.

Prerequisite: ENGR 3300.

The use of computer aided design/computer aided manufacturing. Computer modeling of solid objects, advanced mechanism modelling, rapid prototyping and virtual reality.

Offered spring semester of odd-numbered years.

ENGR 4370/6370. Material Science and Experimental Stress Analysis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3300.

Properties and selection of engineering materials. Structure of solids and the effects of solidification, forming and heat treating operations on material properties. Measurement of stresses in materials using strain gage and photoelastic technology.

Offered fall semester of even-numbered years.

ENGR 4420/6420. Industrial Ventilation Design and Control. 3 hours.

Prerequisite: ENGR 2150 and ENGR 3150.

Engineering design of industrial ventilation systems including selection of fans, ductwork, diffusers, hoods, air cleaners, and humidifiers.

Offered spring semester.

ENGR 4440/6440. Environmental Engineering I. 3 hours.

Prerequisite: ENGR 3410 and ENGR 3440.

Engineering science and design related to treatment of drinking water and wastewater as well as the treatment and ultimate disposal of the sludges created during water treatment.

Offered fall semester.

ENGR 4450/6450. Environmental Engineering II. 3 hours.

Prerequisite: ENGR 3520 and ENGR 4440/6440 and ENGR 4480/6480.

Engineering science and design related to environmental modeling, solid waste management, and hazardous waste management. Concepts of risk assessment will also be introduced.

Offered spring semester.

ENGR 4480/6480. Instrumentation for Environmental Quality. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MATH 2700 and PHYS 1212-1212L.

Operation of instrumentation used to measure physical variables which determine environmental quality. The engineering design and application of measuring systems for airborne particulates, gaseous atmospheric contaminants, solar and environmental radiation, and noise will be emphasized.

Offered fall semester.

ENGR 4510/6510. Engineering and Design of Biological Process I. 3 hours.

Prerequisite: ENGR 3520 and BCMB 4010/6010 and MIBO 3500.

Design and analysis of enzymatic and microbial biological reaction systems.

Offered fall semester.

ENGR 4520/6520. Engineering and Design of Biological Processes II. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ENGR 4510/6510.

Unit operations used for biological processing including filtration, centrifugation, cell disruption, isolation, purification, and polishing.

Offered fall semester.

ENGR 4530/6530. Monitoring and Control of Biological Processes. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ENGR 4510/6510.

Concepts of biological process controls; modern control techniques and optimization of batch, fed-batch and continuous bioreactors, and other biological systems.

Offered spring semester.

ENGR 4540/6540. Applied Machine Vision. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Automated vision systems to identification, measurement and quality control. Electromagnetic spectrum, illumination design, imaging sensor election, vision system calibration. Implementation of image processing algorithms for object recognition and classification. Offered spring semester of even-numbered years.

ENGR 4550/6550. Processing Plant Design. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: ENGR 3540.

Design of systems for processing, primarily based upon unit operations processes. Process simulation or modelling for optimization purposes will be applied to processing systems. Plant layout required for processing will be included.

Offered fall semester.

ENGR 4610. Design of Light Steel Structures. 3 hours.

Prerequisite: ENGR 3610.

Design of light frame steel structures. Theory and behavior of these type members under load and their connections.

Offered spring semester.

ENGR 4620. Management of Structural Environments. 3 hours.

Prerequisite: ENGR 3150.

Environmental factors affecting animal and plant production; heat and vapor flow in buildings; design of ventilation systems.

Offered spring semester.

ENGR 4630. Engineering Design of Residential Structures. 3 hours.

Prerequisite: ENGR 2110 and ENGR 2140 and ENGR 2150 and ENGR 2170 and ENGR 3150.

Design of foundations, structural members; heating and cooling systems; water supply and distribution; waste removal; electrical systems; and lighting. Selection of thermal insulation, vapor barriers, windows and doors, and HVAC equipment determined by engineering principles.

Offered fall semester.

ENGR 4740/6740. Biomaterials. 3 hours.

Prerequisite: BIOL 1108-1108L and ENGR 2140.

Biomaterials and groundwork for topics such as mechanical, chemical, and thermal properties of replacement materials and tissues. Implantation of materials in the body is studied for the biological point of view.

Offered fall semester of even-numbered years.

ENGR 4760/6760. Biomechanics. 3 hours.

Prerequisite: BIOL 1108-1108L and ENGR 2130 and ENGR 2140.

The application of engineering principles to body dynamics is discussed. The student should understand the mechanics of the musculoskeletal system. A term design project is required.

Offered fall semester of odd-numbered years.

ENGR 4920. Engineering Design Project. 4 hours. One 4-hour lab period.

Prerequisite: ENGR 2920 and permission of department. Engineering design experience including completion of a design project under the supervision of a project director.

Non-Traditional Format: Students will meet with a faculty review panel every two weeks. The faculty will evaluate progress and feasibility of the work. Offered spring semester.

ENGR 4940. Introductory Systems Modeling. 3 hours. Prerequisite: ENGR 1140 and ENGR 2110 and MATH 2700.

Computer modeling of biological and agricultural processes and the solution of engineering/management problems in agro-industrial systems through computer simulation. Four methodologies will be presented: statistical data fitting, system dynamics, bond graph, and discrete event modeling.

Offered every year on a regular basis.

ENGR 4980. Special Topics in Engineering. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Special problems in engineering design, analysis, or synthesis.

Not offered on a regular basis.

ENGR 5930/7930. GPS with Engineering and GIS Applications. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: ENGR 1120 or GEOG 4370/6370-4370L/6370L.

The Global Positioning System, Differential GPS, and Real Time Kinematic GPS. Applications of GPS to engineering and geographic information systems.

Offered fall semester.

(ENTO) Entomology

College of Agricultural and Environmental Sciences, Department of Entomology

ENTO(BIOL) 2010. Insects and the Environment. 3 hours.

Designed to acquaint students with our dependence on and interaction with insects in today's world.

Offered fall and spring semesters.

ENTO 2500-2500L. Bees and Beekeeping. 4 hours. Two lectures and one 3-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L.

The life history, ecology, behavior, and pollinating activities of honey bees and other bees of the Southeast, including theory and practice of beekeeping.

Offered spring semester.

ENTO 3140-3140L. Insect Natural History. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L.

Insect biology, with emphasis on factors that have made insects one of the most abundant and successful animal groups. Topics include the behavior, ecology, and evolution of the major insect groups. Most laboratory periods will be spent in the field.

Offered spring semester.

(ENTO)CRSS(PATH) 3500. Turfgrass Pest Management. 3 hours.

Prerequisite: CRSS 2830 or CRSS 3500-3270L.

Identification and control of turfgrass weeds, insects, and diseases. Emphasis will be placed on management strategies that include both chemical and non-chemical approaches to the prevention and control of common turfgrass pests.

Offered every year on a regular basis.

ENTO 3650-3650L. Medical Entomology. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L.

Arthropods of medical and veterinary importance, and the diseases they transmit.

Offered spring semester.

ENTO 3740-3740L. Agricultural Entomology. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L.

An introduction to entomology followed by a study of the recognition and control of insect pests of crops and animals. An introductory course designed for non-entomology majors.

Offered fall semester.

ENTO 3820-3820L. Forest Protection Entomology. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L.

Major groups of insects and related arthropods. Identification, biology, and management techniques for major forest insects in North America.

Offered fall semester.

ENTO 3900. Special Problems in Entomology. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

A course designed to permit interested and well-prepared undergraduate students to pursue an entomology problem approved by the staff member under whom the work will be done.

Non-Traditional Format: Course requirements are individually negotiated between the student and instructor.

Offered fall, spring, and summer semesters.

ENTO 4000/6000-4000L/6000L. General Entomology. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1107-1107L and BIOL 1108-1108L.

Functional anatomy and physiology, behavior, ecology, insects as vectors of pathogens, chemical and biological control of pests. Laboratory sessions are devoted primarily to collecting and the identification of major families of insects.

Offered fall semester.

ENTO 4010/6010-4010L/6010L. Insect Taxonomy. 3 hours. Three lectures and two 2-hour lab periods.
Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Insect identification, classification, and phylogeny; collection and preparation techniques for insect specimens; introduction to theoretical and practical aspects of systematics.
Offered fall semester.

ENTO(CRSS) 4250/6250-4250L/6250L. Pesticide Management and Utilization. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L and [(CHEM 2100 and CHEM 2100L) or (CHEM 2211 and CHEM 2211L)].

Practical management and utilization of pesticides in urban and agricultural environments. Subject areas include classification of insecticides, herbicides, and fungicides, etc., their general chemical and toxicological properties, deployment philosophy, hazards and environmental impact, formulation and application, safety and disposal, and management of pesticide resistance.
Offered spring semester.

ENTO 4400/6400-4400L/6400L. Insect Behavior. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: ENTO 4000/6000-4000L/6000L.
Principles of behavior; communication, sexual behavior, anti-predator adaptations, insect-plant interactions, and insect sociality.
Offered spring semester of even-numbered years.

ENTO 4740/6740-4740L/6740L. Insect Pest Management. 3 hours. Three lectures and one 2-hour lab period.

Prerequisite: ENTO 3740-3740L or permission of department.

Major applied insect control techniques; the advantages and limitations of these tactics including practicality, economics, environmental impact, etc. Integrated control systems for development of a pest management program.
Offered spring semester of even-numbered years.

ENTO 4820/6820-4820L/6820L. Entomology in Natural Resources Management. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or permission of department.

Arthropods important in management of forest resources including timber, wildlife, and recreation.
Offered fall semester of odd-numbered years.

ENTO 4960. Undergraduate Research in Entomology. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: ENTO 4000/6000-4000L/6000L or permission of department.

Directed research on insects in the laboratory or field. Non-Traditional Format: Students will conduct original

supervised research requiring at least twelve hours in the laboratory per week.

Offered fall, spring, and summer semesters.

ENTO 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

This course affords Honor students of senior standing the opportunity to engage in individual directed study. Non-Traditional Format: Directed research on insects in the laboratory or field.

Offered fall, spring, and summer semesters.

ENTO 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

This course affords Honor students of senior division standing the opportunity to engage in individual directed study.

Non-Traditional Format: Directed research on insects in the laboratory or field.

Offered fall, spring, and summer semesters.

ENTO 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Directed research leading to an honors thesis.

Offered fall, spring, and summer semesters.

ENTO 5730/7730-5730L/7730L. Entomology for Teachers. 3 hours. Three lectures and one 3-hour lab period.

Prerequisite: Permission of department.

Insects and related forms, their identification, and life habits, with emphasis on their use in pre-college life science curricula.

Offered summer semester.

(EOCS) Occupational Studies

College of Education, Department of Occupational Studies

EOCS 2450. Practicum in Occupational Studies I. 1-3 hours. Repeatable for maximum 3 hours credit.

Initial supervised field experience related to teaching individuals in programs of occupational education.

Non-Traditional Format: Supervised experience in school or occupational setting.

Offered fall, spring, and summer semesters.

EOCS 3010. Introduction to Occupational Studies. 3 hours.

Teaching in an occupational studies discipline with emphasis on programs which prepare individuals for the workforce.

Offered fall and spring semesters.

Occupational Studies

EOCS 3450. Practicum in Occupational Studies II.

1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: EOCS 2450.

Supervised field experience related to teaching individuals in programs of occupational education.

Non-Traditional Format: Observation and participation experience in a school setting.

Offered fall and spring semesters.

EOCS 4000/6000. Directed Readings in Occupational Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Individual research in an occupational studies discipline under the direction of a faculty member.

Non-Traditional Format: Independent study completed under supervision of a faculty member.

Offered fall, spring, and summer semesters.

EOCS 4010. Student Assessment in Programs of Occupational Studies. 2 hours.

Planning and implementing traditional and authentic assessment strategies, methods, and techniques to assess student learning and development in programs of occupational studies.

Offered fall semester.

EOCS 4100/6100. Principles and Practices of Career Education. 3 hours.

Career education in elementary, middle, and secondary schools; major theories of career development; use of standardized assessment, career information resources, and curriculum materials; special issues and trends influencing work and careers.

Offered spring semester.

EOCS 4350/6350. Curriculum Planning in Occupational Studies. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for occupational studies programs.

Offered fall, spring, and summer semesters.

EOCS 4360/6360. Instructional Strategies in Occupational Studies. 3 hours.

Teaching materials, methods, techniques, and strategies utilized in programs of occupational studies.

Offered fall, spring, and summer semesters.

EOCS 4450. Professional Development in Occupational Studies. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: EOCS 2450.

Various roles of occupational education teachers with emphasis on preparing to enter the teaching profession.

Offered fall and spring semesters.

EOCS 4990/6990. Topics in Occupational Studies.

1-3 hours. Repeatable for maximum 6 hours credit.

Contemporary issues in occupational studies with

emphasis on the effect of these issues on education and the workplace.

Offered fall and spring semesters.

EOCS 5030/7030. Organizing and Coordinating Work and Community-Based Education Programs. 3 hours.

Planning, implementing, and directing various school-to-career transition models in education.

Offered fall and summer semesters.

EOCS 5050/7050. Problems of Teaching Occupational Studies. 3 hours.

Prerequisite: Permission of department.

Selection, utilization, and evaluation of strategies that support effective teaching in occupational studies.

Offered spring semester.

EOCS 5060/7060. Student Organizations in Occupational Studies. 2 hours.

Student organizations in occupational studies programs, emphasizing contributions of organizations to the curricula. Planning, directing, and evaluating activities such as group and individual projects. Techniques of leadership and group development are included.

Offered fall semester.

EOCS 5120/7120. Needs Analysis in Occupational Studies. 3 hours.

Techniques in analyzing occupations, industry, human resources, and communities to determine instructional and training content.

Not offered on a regular basis.

EOCS 5450/7450. Internship in Business and Industry. 1-3 hours. Repeatable for maximum 6 hours credit.

Guided learning experiences in a business or industry for the purpose of updating a student's knowledge or skills in an occupational area.

Non-Traditional Format: Supervised experience in an occupational setting.

Offered fall, spring, and summer semesters.

EOCS 5460. Student Teaching in Occupational Studies. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Full-time supervised student teaching experience in an existing occupational studies program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall, spring, and summer semesters.

EOCS 5550/7550. Students With Special Needs in Programs of Occupational Studies. 3 hours.

Learning characteristics of students with special needs, including those who are disabled, economically and academically disadvantaged. Implications for occupational studies are considered and modifications of curriculum and instruction are identified.

Offered fall, spring, and summer semesters.

(EPSY) Educational Psychology

College of Education, Department of Educational Psychology

EPSY 2020. Learning and Development in Education. 3 hours.

Not open to students with credit in EPSY 2020H.

Major theories, ideas, and research findings about learning, and child and adolescent development, including development of motivation, with special emphasis on practical implications for school teaching and learning.

Offered on a regular basis.

EPSY 2020H. Learning and Development in Education (Honors). 3 hours.

Not open to students with credit in EPSY 2020.

Prerequisite: Permission of Honors.

Learning and developmental processes and their application to educational settings. Special emphasis is placed on cognitive theory as it relates to school learning and experimental methods for conducting studies of the learner.

Offered on a regular basis.

EPSY 3010. Child and Adolescent Development for Education. 3 hours.

Prerequisite: EPSY 2020.

Cognitive, sociocultural, emotional, and moral development from infancy to early adulthood, with particular emphasis placed on developmental issues relevant to education.

Offered on a regular basis.

EPSY 3010H. Child and Adolescent Development for Education (Honors). 3 hours.

Not open to students with credit in EPSY 3010.

Prerequisite: EPSY 2020 and permission of Honors.

Child and adolescent development is examined in-depth from an educational perspective. Cognitive, emotional, moral, and social aspects of development are emphasized.

Offered on a regular basis.

EPSY (PSYC)(ARTI) 3020. Introduction to Cognitive Science. 3 hours.

Prerequisite: PSYC 1101 or PHIL 1010 or EPSY 2020.

Interdisciplinary study of mind and intelligent activity that forms cognitive sciences. Contributions of psychology, philosophy, linguistics, biology, anthropology, computer science, and education toward uncovering important aspects of the mind and intelligent activity are discussed.

Offered on a regular basis.

EPSY 4000/6000. Independent Study in Educational Psychology. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent study agreed upon by the student and sponsoring professor.

Non-Traditional Format: Prior arrangement with professor is made for course work assignment and hours to be completed.

Offered on a regular basis.

EPSY 4060. Psychological Interventions in the Schools. 3 hours.

The roles, functions, and practices of child psychologists in schools and other applied settings.

Offered on a regular basis.

EPSY 4310/6310. Prevention and Remediation of Classroom Behavior Problems. 3 hours.

Prevention and management of classroom behavior problems using behavioral, humanistic, and motivational strategies. Focuses on prevention of problem behaviors through effective teaching and classroom design.

Offered on a regular basis.

(ERSH) Educational Research and Measurement

College of Education

ERSH 4200/6200. Methods of Research in Education. 3 hours.

Diverse research approaches used in behavioral science settings, including critical review and interpretation of published research.

Offered on a regular basis.

ERSH 4600/6600. Applied Educational Assessment. 3 hours.

Development, administration, scoring, analysis, and interpretation of classroom educational assessments used in the service of instruction and accountability objectives. Traditional as well as current approaches (portfolios, performance assessments). Although classroom approaches are emphasized, standardized measures are also studied.

Offered on a regular basis.

(ESCI) Science Education

College of Education, Department of Science Education

ESCI 3450. Practicum in Science Education. 2 hours. One 1-hour lab period.

Intensive school-based experiences in grades 7 through 12 requiring students to teach in varied cultural and regional settings.

Non-Traditional Format: One hour a week in a school based practicum.

Offered on a regular basis.

Science Education

ESCI 4000/6000. Special Problems in Science Education. 1-6 hours. Repeatable for maximum 6 hours credit. Specialized study appropriate to the needs of the individual.

Non-Traditional Format: Independent study.

Offered fall, spring, and summer semesters.

ESCI 4030/6030. Teaching Science to Students with Special Educational Needs. 3 hours.

Basis and practice of modifying science programs/teaching for students with special educational needs and introductory skills for modifying science programs/teaching strategies.

Not offered on a regular basis.

ESCI 4420. Science for Early Childhood Education. 3 hours.

Prerequisite: Permission of department.

Science curriculum, instructional practices, and assessment techniques for young children. Content selection and organization, lesson and unit planning, teaching and assessment materials.

Offered fall and spring semesters.

ESCI 4430. Science Curriculum for the Middle Grades. 3 hours.

Prerequisite: Permission of department.

Corequisite: GEOL 4750/6750.

Examination and selection of science curriculum materials and assessments. Evaluating and reformulating materials for relevance to middle grades classrooms. Special attention to examples and problems drawn from the life, earth, and environmental sciences.

Offered fall semester.

ESCI 4440. Science Teaching Methods in the Middle Grades. 3 hours.

Prerequisite: Permission of department.

Science teaching methods using classroom, laboratory, and field experiences. Development of a range of strategies appropriate for use with middle grades students. Special attention to examples and problems drawn from the physical sciences.

Offered spring semester.

ESCI 4450/6450. Science Curriculum and Learning. 3 hours.

Prerequisite: EPSY 2020.

Science curriculum models for students in grades 7 through 12 in relation to goals for science education and classroom practice. Development, selection, and evaluation of curricular materials based on research in learning.

Offered fall and spring semesters.

ESCI 4460/6460. Methods of Science Teaching. 3 hours.

Prerequisite: EPSY 2020 and EFND 2030.

Corequisite: ESCI 3450 and ESCI 4450/6450.

Science instructional strategies and classroom assessment for students in grades 7 through 12. Classroom

management, lesson planning, and safety in the science classroom.

Offered fall and spring semesters.

ESCI 4470/6470. Special Topics in Science Teaching. 3 hours.

Corequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460.

Selected modules on science teaching and learning on special topics such as applications of life science teaching; applications of physical science teaching; interdisciplinary science teaching; multimedia and computers in science teaching; reading, writing, and literacy in science.

Offered fall and spring semesters.

ESCI 4480/6480. Technological Capabilities for Science Teaching. 3 hours.

Prerequisite: ESCI 4450/6450 or permission of department.

Classroom applications of electronic technologies to science teaching, including analog audiovisual media, microcomputers, telecommunications networks, and their interactions. Technology-facilitated teaching strategies and curriculum integration in science teaching at the middle and secondary school levels.

Offered fall semester.

ESCI 5460/7460. Science Education Student Teaching. 9 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5470/7470 and ESCI 5480/7480.

School-based experiences in grades 7 through 12 under the supervision of a university supervisor.

Non-Traditional Format: Eleven weeks, full-time experience.

Offered fall and spring semesters.

ESCI 5470/7470. Reflection on Science Teaching. 3 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5460/7460 and ESCI 5480/7480.

Topics following student teaching include development as a reflective practitioner, preparation for being a first year teacher, and professional portfolio development.

Offered fall and spring semesters.

ESCI 5480/7480. Philosophy and Leadership in Science Classroom Practice. 3 hours.

Prerequisite: ESCI 3450 and ESCI 4450/6450 and ESCI 4460/6460 and ESCI 4470/6470.

Corequisite: ESCI 5460/7460 and ESCI 5470/7470.

Historical, cultural, social, political, and professional influences related to science classroom practice in grades 7 through 12.

Offered fall and spring semesters.

(ESOC) Social Science Education

College of Education, Department of Social Science Education

ESOC 2380. Using Computers in Social Science Education. 1 hour. One 2-hour lab period.

Computer technology skills, including social science education applications.

Offered on a regular basis.

ESOC 2450. Initial Field Experience in Social Science Education. 1 hour.

In-school observation of middle and secondary grades in social studies.

Non-Traditional Format: In-school observation of middle and secondary grades social studies supervised by faculty.

Offered spring semester. 7

ESOC 3420. Early Childhood Social Studies. 2-3 hours.

Prerequisite: Permission of department.

Social studies curriculum and instruction for young children; content selection, lesson and unit planning, teaching methods, materials, and evaluation strategies.

Offered fall and spring semesters. 7

ESOC 4000/6000. Special Problems in Social Science Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Intensive study of a problem in social science education through library research or collection and analysis of primary data.

Non-Traditional Format: Individual study supervised by a faculty member.

Offered fall, spring, and summer semesters.

ESOC(HIST) 4150/6150. Teaching United States History. 3 hours.

Classic historiography and current debates among historians over major themes and events in United States history. Examination of ways in which this historical scholarship can be incorporated into social studies teaching. Evaluation of materials and methods used to teach United States history in secondary and middle schools.

Offered on a regular basis.

ESOC 4350/6350. Social Science Curriculum in Secondary Schools. 3 hours.

Prerequisite: ESOC 2450 or permission of department.

Current status of and trends in the social science curriculum in secondary schools, with illustrations of selected curriculum models for both cognitive and affective learning.

Offered fall and spring semesters.

ESOC 4360/6360. Methods of Teaching Social Science in Secondary Schools. 3 hours.

Prerequisite: Permission of department.

Instructional objectives and the examination and application of instructional procedures, utilization of media, and methods of evaluation.

Offered fall and spring semesters.

ESOC 4400/6400. Teaching Social Studies in the Middle Grades. 3 hours.

Prerequisite: Permission of department.

Instructional procedures and materials focusing upon the cognitive and affective processes relevant to middle grades social studies education.

Offered on a regular basis.

ESOC 4450. Senior Field Experience in Social Science Education. 1 hour. One 2-hour lab period.

Prerequisite: Permission of department.

Observation and practical experience in middle and secondary grades social studies.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall and spring semesters.

ESOC 5010/7010. Teaching of Geography. 3 hours.

Prerequisite: Permission of department.

Geographic principles and the history of geography in the school curriculum; the literature of the field, including textbooks; the application of special techniques; and geographic evaluation.

Offered on a regular basis.

ESOC 5200/7200. Economic Education in the Social Science Curriculum. 3 hours.

Instructional strategies and materials for teaching basic economic concepts in an integrated kindergarten through grade 12 social science curriculum, with emphasis on utilizing a decision-making model for analyzing contemporary economic problems.

Offered on a regular basis.

ESOC 5460/7460. Student Teaching in Social Science Education. 1-9 hours. Repeatable for maximum 18 hours credit.

Prerequisite: Permission of department.

Teaching social studies in the middle or secondary grades under supervision of school and university professional personnel.

Non-Traditional Format: In-school teaching experience in middle and secondary grades social studies supervised by faculty.

Offered fall and spring semesters.

ESOC 5520/7520. Teaching Politics, Government, and Citizenship. 3 hours.

Prerequisite: Permission of department.

Rationale for and resources in political science and civic/citizenship education, the role of teachers and schools in political socialization, and teaching procedures for instruction on state and local citizenship in middle grades and high schools.

Offered on a regular basis.

(ETES) Technological Studies

College of Education, Department of Occupational Studies

ETES 2010. Internship in Technological Studies. 1-3 hours. Repeatable for maximum 9 hours credit.

Supervised educational experiences to address specified goals and objectives for teaching technological studies.

Non-Traditional Format: Supervised experience in school or occupational setting.

Offered fall, spring, and summer semesters.

ETES 3100. Technical Field Theory. 3-12 hours. Repeatable for maximum 12 hours credit.

Corequisite: ETES 3110.

Achievement in technical theory associated with occupational fields evaluated through National Occupational Competency Testing Institute or official scores submitted from a health care credential agency. Technological studies students are administered written examination to determine competence. Credit recommended by comparing scores with national norms.

Non-Traditional Format: Credit awarded based on test score/performance.

Offered fall, spring, and summer semesters.

ETES 3110. Technical Field Skills. 3-12 hours. Repeatable for maximum 12 hours credit.

Corequisite: ETES 3100.

Performance achievement in technical field evaluation through National Occupational Competency Testing Institute or official scores submitted from a health care credential agency. Technological studies students are administered comprehensive performance examination on tasks common to specific occupational field. Credit recommended by comparing scores with national norms.

Non-Traditional Format: Credit awarded based on test score/performance.

Offered fall, spring, and summer semesters.

ETES 3320. Creative Activities for Teachers. 3 hours. One lecture and three 2-hour lab periods.

Demonstration and hands-on learning, including problem solving, designing, construction, and testing of prototypes, and activities that increase aesthetic, psychomotor, and cognitive development.

Offered fall, spring, and summer semesters.

ETES 4350/6350. Developing Programs in Technological Studies. 3 hours.

Content identification, program organization, preparation of instructional objectives, and guidelines for selection and development of instructional materials for technological studies.

Offered fall semester.

ETES 5010/7010. Technology and Society. 3 hours. Impact of technology on society and culture. Included is the investigation of positive and negative aspects of various technologies, with specific attention to the technology education curriculum.

Offered fall semester.

ETES 5020/7020. Communication Systems. 3 hours.

Communication technology in business and industry. Use of microcomputer applications for computer graphics, desktop publishing, electronic presentation, and telecommunications, including layout and design principles and procedures, graphic production systems, photographic processes, societal impacts, and innovative technologies.

Offered fall semester.

ETES 5030/7030. Manufacturing Systems. 3 hours.

Manufacturing through the design, planning, and development of a specific product.

Offered fall semester.

ETES 5040/7040. Construction Systems. 3 hours.

Construction practices used to produce structures in residential and commercial settings. Special emphasis placed on safety in laboratory-based education.

Offered spring semester.

ETES 5060/7060. Energy Systems. 3 hours.

Present and future applications of the technical, economic, and environmental aspects of energy systems and evaluation of their advantages and disadvantages.

Offered on a regular basis.

ETES 5070/7070. Research and Experimentation in Technological Studies. 3 hours.

Solving technological problems through the analysis and implementation of technical research and experimentation methods. Suitable research and experimentation activities will be developed and analyzed for technology education programs in secondary schools.

Offered on a regular basis.

ETES 5140/7140. Laboratory Planning, Management, and Safety. 3 hours.

Planning and managing laboratories, including the development of a safety program and selection of equipment, tools, and supplies.

Offered fall semester of even-numbered years.

ETES 5460. Student Teaching in Technological Studies. 1-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Supervised student teaching experience in an existing technological studies program.

Non-Traditional Format: Supervised full-time experience in school setting.

Offered fall, spring, and summer semesters.

(EXRS) Exercise Science*College of Education, Department of Exercise Science*

EXRS 2010. Introduction to Exercise Science. 2 hours.
The exercise and sport sciences, including history, elementary concepts, methodologies, applications, and career opportunities.
Offered fall and spring semesters.

EXRS 2100. Introduction to Athletic Training. 3 hours.
Modern principles in the prevention, care, treatment, rehabilitation, and management of athletic related injuries and illnesses.
Offered fall and summer semesters.

EXRS 2130. Athletic Training Emergency Care. 1 hour.
Prerequisite: EXRS 2100 and EXRS 3470 and permission of school.
Rapid assessment, resuscitation, packaging, and transportation techniques for injured athletes.
Offered on a regular basis.

EXRS 3100. Recognition and Evaluation of Athletic Injuries I. 3 hours.
Prerequisite: EXRS 2100 and EXRS 3470 and permission of school.
Methods and techniques in the recognition and evaluation of athletic injuries to the upper body.
Offered spring semester.

EXRS 3110. Recognition and Evaluation of Athletic Injuries II. 3 hours.
Prerequisite: EXRS 2100 and EXRS 3470 and permission of school.
Methods and techniques in the recognition and evaluation of athletic injuries to the lower body.
Offered fall semester.

EXRS 3450. Practicum in Fitness and Conditioning. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of school.
Individual practical experience in exercise leadership, fitness testing, and clinical exercise testing conducted at the University of Georgia fitness center and recreational activity facilities.
Non-Traditional Format: Contact hours established by supervisor.
Offered fall, spring, and summer semesters.

EXRS 3460. Practicum in Physical Therapy. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: EXRS 3450 and permission of school.
Individual practical experience in physical therapy conducted at clinical settings under the supervision of certified physical therapists.
Non-Traditional Format: Contact hours established by supervisor.
Offered fall, spring, and summer semesters.

EXRS 3470. Practicum in Athletic Training. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of school.
Study and treatment of athletic injuries under the guidance and direct supervision of physicians and certified athletic trainers.
Non-Traditional Format: Contact hours established by supervisor.
Offered fall, spring, and summer semesters.

EXRS 3480. Practicum in Exercise Science Research. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of school.
Individual practical experience assisting with research in exercise science.
Non-Traditional Format: Contact hours established by supervisor.
Offered fall, spring, and summer semesters.

EXRS 3600. Applied Biomechanics. 2 hours.
Not open to students with credit in EXRS 4200/6200-4200L/6200L.
Prerequisite: CBIO 2200-2200L and MATH 1101.
Biomechanical principles of human motion and the structure of the human body. Laws of mechanics and tissue biomechanics concepts are applied to sport, dance, daily living activities, physical training, and injury etiology and prevention. Designed for the non-exercise-science major.
Offered spring semester.

EXRS 3700. Applied Exercise Physiology. 2 hours.
Not open to students with credit in EXRS 4630/6630-4630L/6630L.
Prerequisite: CBIO 2200-2200L.
Physiological responses to exercise and adaptations to training. Influence of physical activity on health, design of conditioning programs, physical activity in select populations and conditions. Designed for non-exercise-science majors.
Offered fall semester.

EXRS 3830. Measurement and Evaluation in Exercise Science. 3 hours.
Prerequisite: EXRS 2010 and MATH 1113 and permission of school.
Methods in measuring and evaluating physical performance, knowledge, and attitudes; procedures for evaluating tests and their results; data analysis techniques.
Offered fall semester.

EXRS 4000. Special Problems in Exercise and Sport Science. 1-6 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Permission of school.
Independent study of selected topics in exercise and sport science.
Non-Traditional Format: Variable hours established by faculty.
Offered fall, spring, and summer semesters.

EXRS 4100. Therapeutic Modalities in Athletic Training. 3 hours.

Prerequisite: EXRS 3100 and EXRS 3110 and permission of school.

Therapeutic modalities in the treatment of athletic injuries, including cryotherapy, thermotherapy, electrical stimulation, ultrasound, traction, mobilization, and massage.

Offered spring semester.

EXRS 4110. Rehabilitation Techniques in Athletic Training. 3 hours.

Prerequisite: EXRS 3100 and EXRS 3110 and permission of school.

Rehabilitative techniques involving structured exercise for improving joint range of motion, strength, muscular endurance, balance, proprioception, and cardiovascular fitness used in the treatment of athletic injuries.

Offered fall semester.

EXRS 4120. Seminar in Athletic Training. 3 hours.

Prerequisite: EXRS 4100 and EXRS 4110 and permission of school.

Specific competencies within the field of athletic training, including management and administrative components for a high school, college, or professional organization.

Offered spring semester.

EXRS 4200/6200-4200L/6200L. Biomechanics I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and (PHYS 1111-1111L or PHYS 1211-1211L) and permission of school; Graduate level only: Permission of school.

Mechanical principles to human movement, equipment design, and injury.

Offered fall semester.

EXRS 4300/6300. Exercise Epidemiology. 3 hours.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Health-related aspects of exercise, physical activity, and physical fitness from the perspective of epidemiology. Biological mechanisms for healthy adaptations to physical activity and the behavioral determinants of exercise participation.

Offered fall semester.

EXRS 4310/6310. Physical Fitness Programs. 3 hours.

Prerequisite: Permission of school.

Physical fitness programs for adults and special populations. Topics include program goals and objectives, principles and methods of physical fitness development and testing, evaluation of existing programs, and administrative and programming considerations.

Offered summer semester of even-numbered years; offered fall semester of odd-numbered years.

EXRS 4320/6320. Physical Activity and Aging. 3 hours.

Prerequisite: EXRS 4630/6630-4630L/6630L and permission of school.

Biological and psychological effects of aging in relation to physical activity and exercise.

Offered spring semester of odd-numbered years.

EXRS 4400/6400. Exercise and Sport Psychology. 3 hours.

Prerequisite: Undergraduate level only: PSYC 1101 and CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Effects of participating in exercise and sport on psychological traits and states. Cognitive and neurobiological mechanisms and psychological limitations to athletic performance.

Offered fall semester.

EXRS 4630/6630-4630L/6630L. Exercise Physiology I. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: CBIO 2200-2200L and CBIO 2210-2210L and permission of school; Graduate level only: Permission of school.

Physiological effects of human physical activity. Neuromuscular, cardiovascular, respiratory, metabolic, hormonal, and thermal responses and adaptations to exercise.

Offered spring semester.

EXRS 4640-4640L. Scientific Principles of Conditioning and Fitness. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: EXRS 4630/6630-4630L/6630L and permission of school.

Designing and implementing individualized exercise prescriptions for athletic conditioning or physical fitness development. Development of skills required in conducting physical fitness tests for aerobic power, body composition, flexibility, and muscular strength and endurance.

Offered fall and spring semesters.

EXRS 4690/6690-4690L/6690L. Exercise Physiology II. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Undergraduate level only: EXRS 4630/6630-4630L/6630L and permission of school; Graduate level only: Permission of school.

Mechanics, energetics, and motor unit recruitment during skeletal muscle contraction; regulation of energy metabolism during exercise; mechanisms underlying oxygen delivery to muscle during exercise.

Offered fall semester.

EXRS 4800-4800L. Biomechanics II. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: EXRS 4200/6200-4200L/6200L and permission of school.

Effects of mechanical forces on bones, muscles, and connective tissue. The biomechanics of specific regions of the body and mechanically-induced injuries are studied.

Offered spring semester of even-numbered years.

EXRS 5450. Internship in Exercise and Sport Science. 3-15 hours. Repeatable for maximum 15 hours credit.
Prerequisite: Permission of school.
Practical experience in an off-campus sports medicine or health/fitness program.
Non-Traditional Format: Contact hours established by supervisor.
Offered fall, spring, and summer semesters.

(FDNS) Foods and Nutrition

*College of Family and Consumer Sciences,
Department of Foods and Nutrition*

FDNS 2000. Introduction to Family and Consumer Sciences. 1 hour.

The specialties and professions comprising the fields in family and consumer sciences. Systems perspective is emphasized in examining quality of life issues. Discussions include the personal, professional, and technical elements involved in career development.
Offered fall and spring semesters.

FDNS 2100. Human Nutrition and Food. 3 hours.
Nutritional needs and food choices for the optimal health of the individual during the life cycle.
Offered fall and spring semesters.

FDNS 2400. Introduction to Nutrition Science. 1 hour.
Orientation for new students in nutrition science. Problem-based discussions concerning the basic sciences relating to nutrition research.
Offered spring semester of odd-numbered years.

FDNS 3100. Macronutrients and Energy Balance. 3 hours.
Prerequisite: FDNS 2100 and BCMB (BIOL) (CHEM) 3100 and (CBIO 2210-2210L or VPHY 3100).
Human nutrition related to carbohydrates, lipids, protein, and energy with special emphasis on diet and performance under varying conditions of health. Topics include food sources, biochemical functions, and metabolism.
Offered spring semester.

FDNS 3600-3600L. Food Principles. 4 hours. Three lectures and one 3-hour lab period.
Prerequisite: CHEM 1212 and CHEM 1212L.
Food selection, preparation, evaluation, and composition.
Offered fall and spring semesters.

FDNS 3610-3610L. Quantity Food Production. 4 hours. Three lectures and one 3-hour lab period.
Prerequisite: FDNS 3600-3600L.
Principles of food preparation in large quantities; institutional equipment and procedures.
Offered spring semester.

FDNS 4050/6050. Optimal Nutrition for the Life Span. 3 hours.

Not open to students with credit in FDNS 4510/6510.
Prerequisite: FDNS 2100.
Nutritional needs of infants, young children, adolescents, pregnant and lactating women, and middle-aged and elderly people.
Offered every year on a regular basis.

FDNS 4100/6100. Micronutrient Nutrition. 4 hours.
Prerequisite: FDNS 3100.

Human needs for vitamins, minerals, and electrolytes with emphasis on biochemistry, physiology, epidemiology, food sources, and their role in performance under varying conditions of age and health.
Offered fall semester.

FDNS 4510/6510. Nutrition Related to the Human Life Cycle. 3 hours.

Prerequisite: FDNS 3100.
Nutritional health needs related to specific stages of the human life cycle. Special emphasis will be given to physiological changes and nutrition needs during pregnancy, lactation, infancy, childhood, adolescence, and adulthood.
Offered fall semester.

FDNS 4520/6520. Dietetic Practice and Nutrition Support. 2 hours.

Corequisite: FDNS 4530/6530.
Specialized nutrition practice in the clinical setting including nutrition assessment, enteral and parenteral nutrition, and nutrition care documentation.
Offered on a regular basis.

FDNS 4530/6530. Medical Nutrition Therapy. 4 hours.
Prerequisite: FDNS 4100/6100.

Diet modifications for disease prevention and treatment. Special emphasis is given to the study of gastrointestinal disease and metabolic, cardiovascular, and renal disorders.
Offered spring semester.

FDNS 4540/6540. Public Health Dietetics. 3 hours.

Prerequisite: FDNS 4050/6050 or FDNS 4510/6510
Nutrition in public health care and tools for successful management and delivery of nutrition services, including knowledge of community assessment, planning, implementation, and evaluation as related to nutritional care.
Offered spring semester

FDNS 4550/6550. Nutritional Biodynamics. 3 hours
Two lectures and one 2-hour lab period

Prerequisite: FDNS 3100
Nutrients as precursors for organ and cell components and energy stores, emphasizing processes of turnover, growth, biosynthesis, and metabolism. Students will explore quantitative and dynamic issues using interactive computer modeling.
Offered fall semester.

Foods and Nutrition

FDNS 4560/6560. Nutrition and Aging. 3 hours.

Prerequisite: (FDNS 3100 or FDNS 4050/6050) and (CBIO 2210-2210L or VPHY 3100).

Foods and nutrients in the health and well-being of the elderly; effects of aging on macro and micronutrient needs; influence of disease, medications, economics, and culture; nutritional assessment, support, and services; health promotion and disease prevention; future directions for research.

Not offered on a regular basis.

FDNS 4580. Undergraduate Special Topics in Foods and Nutrition. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FDNS 3100 or FDNS 4050/6050.

Selected topics from the field of foods and nutrition.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall and spring semesters.

FDNS 4600/6600. Food and the Consumer. 3 hours.

Prerequisite: FDNS 3600-3600L.

Health, safety, and policy issues related to food consumption trends; nutrient composition of foods, food additives, food allergies and hypersensitivities, naturally occurring toxins, pathogens, pesticides, biotechnology-derived foods, irradiated foods, and food laws and regulations.

Offered spring semester.

FDNS 4610/6610. Foodservice Procurement and Financial Management. 2 hours.

Prerequisite: FDNS 3610-3610L.

Purchasing methods, specifications, storage and issuing procedures, inventory systems. Cost control, budgets, and financial statements used in foodservice organizations.

Offered fall semester.

FDNS 4620/6620. Management of Foodservice Organizations. 3 hours.

Prerequisite: FDNS 4610/6610.

Management, staffing, and delivery systems as they pertain to the resources and organization of public and private foodservice institutions.

Offered spring semester.

FDNS 4630/6630. Cultural Aspects of Foods and Nutrition. 3 hours.

Prerequisite: FDNS 2100 and FDNS 3600-3600L.

Foodways, food habits, and food-related behavior of various population groups and their influences on the nutritional status of group members.

Offered fall semester.

FDNS 4640/6640. Food Sanitation and Safety. 3 hours.

Prerequisite: FDNS 3600-3600L.

Safe food handling for foodservice and the consumer, with emphasis on causes and prevention of foodborne illness.

Offered fall semester.

FDNS 4650/6650. Experimental Study of Food. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: (FDNS 2100 and FDNS 3600-3600L and STAT 2000) or permission of department.

Prerequisite or corequisite: CHEM 2200 and CHEM 2200L.

Functional and nutritional properties of components in food products; techniques to evaluate food products for consumer acceptability including individual and group laboratory experimentation; computer applications.

Offered spring semester.

FDNS 4660/6660. Delivery Systems for Food and Nutrition Information. 3 hours.

Prerequisite: FDNS 2100 and FDNS 3600-3600L and one course in Speech.

Transfer of food and nutrition information to consumers using various media.

Not offered on a regular basis.

FDNS 4710/6710-4710L/6710L. Catering. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: FDNS 3610-3610L or permission of department.

Types of catering; establishing catering businesses; principles and practice of menu planning, work planning, food preparation, styles of service, cost accounting, and resource management.

Not offered on a regular basis.

FDNS 4720/6720. Menu Management and Service. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Meal planning and service styles for individuals, families, and institutions; cultural, nutritional, marketing and social aspects of foods; government regulations related to meal planning.

Not offered on a regular basis.

FDNS 4730/6730. Food Sales and Service. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Effective sales and service techniques; market research and strategies specific to the foodservice industry.

Not offered on a regular basis.

FDNS 4740/6740. Food Service Facilities Planning and Development. 3 hours.

Prerequisite: FDNS 3610-3610L or permission of department.

Concepts, strategies, and skills needed in planning designing, and equipping food service facilities.

Not offered on a regular basis.

FDNS 4750/6750. Foodservice Cost Controls and Systems. 3 hours.

Prerequisite: FDNS 4620/6620 or permission of department.

Cost control and accounting principles for the

foodservice industry; manual and computer information systems for foodservice inventory and cost control.
Not offered on a regular basis.

FDNS 4900. Seminar in Foods and Nutrition. 1 hour.
Prerequisite: FDNS 3100.
Survey of current literature on selected topics in foods and nutrition.
Offered on a regular basis.

FDNS 4960H. Directed Honors Research. 1-3 hours.
Repeatable for maximum 3 hours credit.
Prerequisite: FDNS 2100 and permission of Honors.
Individual study, reading, or projects under the direction of a project director.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

FDNS 4970H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Non-Traditional Format: Directed research with a faculty member.
Offered fall, spring, and summer semesters.

FDNS 4980H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the guidance of a project director.
Non-Traditional Format: Individual research with a faculty member.
Offered fall, spring, and summer semesters.

FDNS 4990H. Honors Thesis. 3 hours.
Prerequisite: Permission of Honors.
Individual research in Foods and Nutrition or a closely related field.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

FDNS 5010. Directed Research in Nutrition Science. 3-9 hours. Repeatable for maximum 9 hours credit.
Prerequisite: FDNS 3100 or BCMB (BIOL) (CHEM) 3100.
Independent research designed for the nutrition science major. Literature review, laboratory work, experimental design, and interpretation of the results will be required.
Non-Traditional Format: Directed research.
Offered fall, spring, and summer semesters.

FDNS 5020. Directed Research in Consumer Foods. 3-6 hours. Repeatable for maximum 6 hours credit.
Prerequisite: FDNS 3600-3600L and STAT 2000 and permission of department.
Independent research in consumer foods, including

literature review, laboratory work, experimental design, and interpretation of the results.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

FDNS 5030. Directed Research in Dietetics. 3-9 hours. Repeatable for maximum 9 hours credit.
Prerequisite: FDNS 3100.
Independent research designed for the dietetics major. Literature review, laboratory work, experimental design, and interpretation of the results will be required.
Non-Traditional Format: Directed research with format appropriate for research project. Variable hours.
Offered fall, spring, and summer semesters.

FDNS 5300. Senior Thesis. 1-3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: FDNS 3100.
Research project and thesis writing.
Non-Traditional Format: Thesis.
Offered fall, spring, and summer semesters.

FDNS 5300H. Honors Thesis. 1-3 hours. Repeatable for maximum 9 hours credit.
Not open to students with credit in FDNS 5300.
Prerequisite: FDNS 2100 and permission of Honors.
Individual research in the major field or in a closely related field to write a thesis.
Non-Traditional Format: Honors thesis.
Offered fall, spring, and summer semesters.

FDNS 5800. Dietetics Practicum. 3 hours.
Prerequisite: FDNS 2100 and FDNS 3600-3600L and permission of department.
Work experience under the direction of a dietitian in a health care or foodservice facility.
Non-Traditional Format: Supervised work experience with a dietitian or other professional in the field of foods and nutrition.
Offered fall, spring, and summer semesters.

FDNS 5910/7910. Foods and Nutrition Internship. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: FDNS 2100 and FDNS 3600-3600L and permission of department.
Supervised experience in dietetics, foodservice management, or a foods and nutrition related industry.
Non-Traditional Format: Supervised practice experience only. Variable hours.
Offered fall, spring, and summer semesters.

FDNS 5930. Consumer Foods Internship. 3-6 hours. Repeatable for maximum 6 hours credit.
Prerequisite: FDNS 3600-3600L and permission of department.
Work in a public or private institution to obtain practical professional experience.
Non-Traditional Format: Internship
Offered fall, spring, and summer semesters.

(FDST) Food Science and Technology

College of Agricultural and Environmental Sciences, Department of Food Science and Technology

FDST 2010. Food Issues and Choices. 3 hours.

Not open to students with credit in FDST 3000.

Scientific preservation of foods. Commercial food products will be viewed from historical, cultural, nutritional, chemical, microbiological, gustatory, and regulatory perspectives. Particular emphasis will be placed on food processes and packages designed to ensure safety and enhance quality.

Offered fall and spring semesters.

FDST 3000. Introduction to Food Science and Technology. 3 hours.

The sources of raw materials; the processing, storage, and handling of processed foods; and the problems involved in the processing of these products.

Offered fall semester.

(FDST)ADSC 3650-3650L. Introductory Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Meat science focusing on the meat industry, role of muscle foods in the human diet, meat inspection, muscle structure and function, conversion of muscle to meat, anatomy, factors influencing meat quality, meat processing, and meat safety and quality control.

Offered spring semester.

(FDST)POUL 3860. Poultry Processing. 3 hours.

Prerequisite: POUL 3600 or FDST 2010 or FDST 3000 or permission of department.

Basic principles and methods of processing poultry and eggs. Broiler harvesting, slaughter, evisceration, plant sanitation, microbiology, inspection, grading, regulations, water and waste water handling, quality control and HACCP plans, further processing, and shell egg handling and processing.

Offered fall semester.

FDST 3910. Food Science Internship. 3 hours.

Provides a practical educational experience while working in an operational food industry plant or laboratory. Non-Traditional Format: At least ten weeks of full-time employment in a food processing plant or laboratory is required.

Offered fall, spring, and summer semesters.

FDST 4000. Food Science Seminar. 1 hour.

Seminar on topics in Food Science.

Offered fall and spring semesters.

FDST 4010/6010. Principles of Food Processing. 3 hours.

Prerequisite: MIBO 3500 and CHEM 2100 and CHEM 2100L and (FDST 2010 or FDST 3000).

Principles of food preservation by chilling, freezing, dehydration, fermentation, and thermal processing. Offered fall semester.

FDST 4020/6020. Processing Methods in Food Science. 2 hours. Two 3-hour lab periods.

Prerequisite: FDST 4010/6010.

Processing methods to control microbial and enzymatic activity and to minimize chemical and physical deterioration of foods.

Offered spring semester.

FDST(MIBO) 4030/6030-4030L/6030L. Food Microbiology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Interactions of microorganisms with food and the implications of these interactions for food preservation safety, and fermentations. Pathogenic microorganisms associated with food. Analysis of foods for the presence of microorganisms.

Offered fall semester.

FDST 4040/6040-4040L/6040L. Food Chemistry. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: BCMB(BIOL)(CHEM) 3100 and (FDST 3000 or FDST 4010/6010).

Chemical, physical, and functional properties of food constituents and ingredients.

Offered fall semester.

FDST 4050/6050-4050L/6050L. Food Engineering Fundamentals. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PHYS 1111-1111L and MATH 2210, 2210L. Prerequisite or corequisite: FDST 4010/6010.

Mass and energy balance, fluid flow, heat transfer, and refrigeration in food plant operations. The theory, calculations and design practices, and equipment used in these operations, as well as the physical, chemical, and microbial changes that can occur in foods in processes employing these operations.

Offered fall semester.

FDST 4060/6060-4060L/6060L. Food Engineering Fundamentals. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FDST 4050/6050-4050L/6050L or permission of department.

Phase equilibria in foods, psychrometrics, water activity, freezing, dehydration, evaporation, membrane separations, extrusion, and process control.

Offered spring semester.

FDST 4070/6070. Nutritional Quality and the Effect of Technology. 3 hours.

Prerequisite: FDST 4040/6040-4040L/6040L or BCMB(BIOL)(CHEM) 3100.

The nutritional properties of food and the effects of modern technology on nutritional quality.

Offered spring semester.

FDST 4080/6080-4080L/6080L. Instrumental Methods of Food Analysis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 2100 and CHEM 2100L.

Spectrophotometric, colorimetric, chromatographic, and potentiometric methods of analysis as applied to food. Emphasis will be placed upon correlation and interpretation of results.

Offered spring semester.

FDST 4090/6090-4090L/6090L. Food Quality Control. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: [FDST 2010 or FDST 3000] and STAT 2000.

Designing and implementing food quality and process control programs. Monitoring and controlling process specifications and capabilities. Developing food attribute and variable control charts. Examining food sampling plans and verifying HACCP food safety plans. Offered spring semester.

FDST 4100/6100. Governmental Regulation of Food Safety and Quality. 2 hours.

Role of mandatory and optional food laws and regulations exercised by state, federal and international agencies on food quality, safety, wholesomeness, and nutrition.

Offered spring semester.

FDST 4110/6110-4110L/6110L. Food Packaging. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: FDST 3000.

Raw materials, processes, and machinery used in the transportation, storage, and marketing of packaged food products. The relationship between packaging materials, food processing operations, and product quality. Evaluation of chemical and physical properties of food package materials.

Offered fall semester.

FDST(MIBO) 4120/6120-4120L/6120L. Food Fermentations. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Microbial and technical aspects of dairy, vegetable, meat, grain, and fruit fermentations. Products studied include cheese, sausage, beer, wine, and soy sauce.

Offered spring semester.

FDST 4130/6130. Food Biotechnology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 or permission of department.

Recombinant DNA in food and enzyme biotechnology, tissue culture, and microbial transformations. Applications and regulations of biotechnology in the fats and oils industry.

Offered spring semester.

FDST(ADSC) 4140/6140-4140L/6140L. Advanced Meat Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FDST(MIBO) 4030/6030-4030L/6030L and FDST 4040/6040-4040L/6040L.

Meat processing and technology, scientific basis for meat as a food, USDA and FDA regulations governing meat processing, and the latest innovations in commercial meat processing.

Offered spring semester.

FDST 4250/6250-4250L/6250L. New Food Product Development. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (FDST 4010/6010 and FDST 4040/6040-4040L/6040L) or permission of department.

New food product development, food constituents and functionality, ingredient functions and selection, sensory evaluation/application, dietary guidelines and food regulations affecting product development, new product development project management, protecting innovations, market testing.

Offered spring semester.

FDST(EHSC)(MIBO) 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems.

Offered fall semester.

FDST(EHSC)(MIBO) 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations.

Offered spring semester.

FDST 4800. Special Problems in Food Science. 1-3 hours.

Prerequisite: Permission of department.

Undergraduate research problems in food science.

Non-Traditional Format: Individual study, reading, and/or laboratory projects under the direction of a project director.

Offered fall, spring, and summer semesters.

FDST 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, and/or projects under the direction of a faculty member.

Non-Traditional Format: Students will complete the requirements for this course under the direction of a faculty member.

Offered fall, spring, and summer semesters.

FDST 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, and/or projects under the direction of a faculty member.

Non-Traditional Format: Students will complete the requirements for this course under the direction of a faculty member.

Offered fall, spring, and summer semesters.

FDST 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of the major or in a closely related field.

Non-Traditional Format: Students will complete the requirements for this course under the direction of a faculty member.

Offered fall, spring, and summer semesters.

FDST 5010/7010-5010D/7010D. Food Formulation and Preservation. 3 hours. One lecture and one 4-hour lab period.

Not open to students with credit in FDST 4010/6010.

Food preservation by chilling, freezing, fermentation, canning, and dehydration. Formulation of food products and interactions of food ingredients. Applications of principles to experiments in food science.

Offered spring semester of odd-numbered years.

(FINA) Banking and Finance

Terry College of Business, Department of Banking and Finance

FINA 3000. Financial Management. 3 hours.

Not open to students with credit in FINA 3000H.

Prerequisite: ACCT 2101 and MSIT 3000.

The basic concepts and analytical tools of finance in both corporate finance and investments. Topics include risk and return, financial institutions, efficient markets, valuation theory, capital budgeting, portfolio theory, cost of capital, and international finance.

Offered fall, spring, and summer semesters.

FINA 3000H. Financial Management (Honors). 3 hours.

Not open to students with credit in FINA 3000.

Prerequisite: ACCT 2101 and MSIT 3000 and permission of Honors.

The basic concepts and analytical tools of finance in both corporate finance and investments. Topics include risk and return, financial institutions, efficient markets, valuation theory, capital budgeting, portfolio theory, cost of capital, and international finance. Discussion and analysis of specific applications of these topics.

Offered on a regular basis.

FINA 4000. Money and Capital Markets. 3 hours.

Prerequisite: FINA 3000.

The operations and functions of domestic and international finance markets and institutions. The determinants of bond prices and the level and structure of interest rates. Techniques for measuring and managing risk in financial markets.

Offered on a regular basis.

FINA 4150. Investment and Portfolio Management. 3 hours.

The fundamental principles of finance as applied to investment, portfolio management, and firms. Emphasis on risk, return, and valuation of securities, other investments, and general cash flows. This is a business elective for business majors (not open to finance majors) and is available for non-business majors.

Offered every year on a regular basis.

FINA 4200. Corporate Finance Theory. 3 hours.

Prerequisite: FINA 3000.

Development of a framework that is useful for understanding a broad range of important corporate financial decisions. Substantial emphasis will be placed on discussion of the determinants of corporate financing and payout policies, alternative methods of security issuance, and mergers and acquisitions.

Offered on a regular basis.

FINA 4210. Applied Corporate Finance. 3 hours.

Prerequisite: FINA 3000.

Corporate financial decision making by applying the tools, techniques, and theories of finance to actual business decisions.

Offered on a regular basis.

FINA 4280/6280. Small Business Finance. 3 hours.

Prerequisite: FINA 3000.

Principles of small business finance and the raising and management of venture capital, financial planning, forecasting, capital budgeting, working capital management, and sources of capital. This course is aimed at students planning careers in either small business management or in small business consulting.

Offered on a regular basis.

FINA 4310. Survey of Investments. 3 hours.

Prerequisite: FINA 3000.

The securities markets, investor objectives, introduction to portfolio theory and the analytical tools of portfolio management, and an examination of investment alternatives.

Offered on a regular basis.

FINA 4320. Derivative Security Markets. 3 hours.

Prerequisite: FINA 4310 and MATH 2200, 2200L.

The markets for futures, options, and other derivative securities. The mechanics of trading, regulation, pricing, hedging, and risk management using derivatives.

Offered on a regular basis.

FINA 4380. Security Analysis. 3 hours.

Prerequisite: FINA 4310.

The determinants of values for individual securities with the emphasis on common stocks. Financial statement analysis, forecasting techniques, and financial modeling.

Offered on a regular basis.

FINA 4420. Management of Financial Institutions. 3 hours.

Prerequisite: FINA 3000.

Asset, liability, and capital management for firms operating in the dynamic environment of the financial-services industry. The acceptance, measurement, and management of risk, both on and off the firm's balance sheet, arising from unexpected changes in interest rates, exchange rates, and commodity prices. Financial-firm simulation game.

Offered on a regular basis.

FINA 4600. Public Finance. 3 hours.

Prerequisite: FINA 3000.

Public finance at the federal, state, and local levels. Governmental revenues and expenditures, inter-governmental fiscal relations, public debt, and fiscal policy.

Offered on a regular basis.

FINA 4800. Internship and/or Cooperative Education. 3 hours.

Prerequisite: FINA 3000.

Students are permitted to enter business establishments or governmental agencies for the purpose of obtaining practical and applied business experience. An in-depth paper based on an approved banking or finance topic is required.

Non-Traditional Format: Internship not involving formal lecture or laboratory.

Offered fall, spring, and summer semesters.

FINA 4810/6810. International Finance. 3 hours.

Prerequisite: FINA 3000.

International business decision making emphasizing the effects of internationalized financial and non-financial markets. Exchange rate analysis, hedged costs of funds, economic exposure and management, capital budgeting, financial and corporate strategy, and the evaluation of international risks and returns.

Offered on a regular basis.

(FINA)AAEC 4870/6870. Futures and Option Markets. 3 hours.

Prerequisite: Undergraduate level only: AAEC 2580 or ECON 2106.

Development, functions, and importance of futures and option markets. Futures and option contracts; issues such as speculation, the roles of commission houses, commodity exchanges, and clearinghouses; and the use of future contracts as instruments for financing business activities. Technical and fundamental trading theories.

Offered fall and spring semesters.

FINA 4920. Special Topics in Finance. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FINA 3000.

Individual, advance study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study not involving lecture or laboratory.

Offered on a regular basis.

(FINA)REAL 5100. Real Estate Finance. 3 hours.

Prerequisite: REAL 4000.

The instruments, techniques, and institutions of real estate finance; sources of funds; mortgage risk analysis: emphasis on typical policies and procedures used in financing of residential, industrial, and commercial properties.

Offered on a regular basis.

(FORS) Forest Resources

Warnell School of Forest Resources

FORS 3000-3000L. Field Orientation and Measurements in Forest Resources. 4 hours. Two lectures and two 4-hour lab periods.

Prerequisite: Enrollment in Professional Program of WSFR.

Land measurements and mapping; forest, wildlife, fisheries, and environmental resource observation and measurement. Use of School computer facilities for the analysis of measurement data and the development of summary descriptions of forest resources systems.

Offered fall and spring semesters.

FORS 3010-3010L. Dendrology. 3 hours. Two lectures and one 4-hour lab period.

Prerequisite or corequisite: BIOL 1108-1108L.

Identification, classification, silvical characteristics and distribution of trees, shrubs, and other plants of importance to the management of forest resources.

Offered fall and spring semesters.

FORS 3020-3020L. Forest Ecology. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

Corequisite: FORS 3010-3010L or BTNY 4650/6650-4650L/6650L.

Individual, population, community and ecosystem processes regulating forest structure and function; interactions and functions of forest plants, animals, and microbes; effects of site, environmental factors, and disturbance on forest composition and dynamics.

Offered fall and spring semesters.

FORS 3040. Tree Physiology. 2 hours.

Prerequisite: (Enrollment in Professional Program of WSFR) or [(BIOL 1108-1108L or BTNY 1210-1210L) and permission of school].

The vital processes and structures of woody plants: photosynthesis, respiration, carbon allocation, water

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relations, mineral nutrition, intrinsic and environmental factors controlling growth, reproduction, and plant morphology and wood anatomy. Human efforts to improve forest trees, including breeding, in vitro propagation, and genetic engineering.
Offered fall semester.

(FORS)CRSS 3060-3060L. Soils and Hydrology. 4 hours. Three lectures and one 2-hour lab period.
Not open to students with credit in CRSS 3050-3050L.
Prerequisite: CHEM 1212 and CHEM 1212L.
Soil formation and morphology, physical and chemical properties, soil-water interactions, hydrologic processes and water balance in the landscape, and soil and water quality. Emphasis on landscape management of soil and water resources for both productivity and environmental quality.
Offered every year on a regular basis.

(FORS)ECOL 3260-3260L. Vertebrate Diversity and Evolution. 4 hours. Two lectures and two 2-hour lab periods.
Not open to students with credit in CBIO 3000-3000L.
Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or permission of department.
The evolution, diversity, and higher order relationships of vertebrate animals and their principal adaptations to life.
Offered fall semester.

FORS 3300. Introduction to Fish and Wildlife Management. 2 hours.
Prerequisite: BIOL 1108-1108L.
Principles governing conservation and management of fish and wildlife. The interrelations of wildlife management and other forest resource uses.
Offered spring semester.

(FORS)RLST 3310. Outdoor Recreation and Environmental Awareness. 3 hours.
Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.
Environmental policies and land ethics of natural resource management agencies. Emphasis will be placed on understanding outdoor recreation behavior and issues arising from human-environment interactions, including carrying capacities and human-wildlife conflicts.
Offered fall semester.

FORS 3500. Wood Properties and Utilization. 2 hours.
Prerequisite: (Enrollment in Professional Program of WSFR).
Corequisite: FORS 3040.
Major uses of wood, characteristics of major wood products, processes involved in their manufacture and marketing, and properties of the wood raw material affecting its quality and use.
Offered spring semester.

FORS(MARS) 3570. The Law of Earth Protection and Resource Use. 3 hours.
Not open to students with credit in AAEC 4930/6930 or FORS 5820/7820.

A first course in legal studies, and an introduction to environmental and natural resources law. Basics of the legal system; selected major protection and resource statutes, regulations, roles and methods of agencies significant judicial opinions.
Offered spring semester.

FORS(ECOL) 3580-3580L. Vertebrate Natural History. 4 hours. Three lectures and one 4-hour lab period.
Prerequisite: BIOL 1108-1108L.
Life history strategies of vertebrates with emphasis on ecology, behavior, taxonomy, and systematics.
Offered fall and spring semesters.

FORS 3610-3610L. Forest Biometrics. 3 hours. Two lectures and one 2-hour lab period.
Corequisite: FORS 3000-3000L.
Basic parametric statistical methods and concepts, including linear models, sample survey design and analysis, and applications to problems in forest resources. Analysis of forest resources data using standard statistical software.
Offered fall and spring semesters.

FORS 3710-3710D. Forest Resource Economics and Management. 3 hours. Two lectures and one 2-hour lab period.
Prerequisite: [ECON 2106 or AAEC 2580] and (Enrollment in Professional Program of WSFR).
Theory and analytical tools used in forest resource management decision making. Topics include the role of economics in forest resource decision making, microeconomic principles, price formation and valuation of non-market outputs.
Offered fall and spring semesters.

FORS 3910-3910L. Spatial Information in Forest Resources. 3 hours. Two lectures and one 3-hour lab period.
Prerequisite: FORS 3000-3000L.
Interpretation and use of maps, aerial photographs, and satellite imagery in forest resources; production of maps from field measurements; determination of land area and ownership; interpretation of contour maps. Spatial data bases: concepts and use.
Offered fall and spring semesters.

FORS 3950. Forest Operations Study Tour. 2 hours.
Prerequisite: FORS 3500 or FORS 4010-4010L or permission of school.
Visits to active forestry operations in the Southeast. Forest management operations, harvesting and transportation operations, and conversion facilities such as pulp/paper mills, sawmills, and other processing plants

will be emphasized. Students are expected to pay for room and board.

Non-Traditional Format: Class involves a week-long field trip before the beginning of fall semester.

Offered fall semester.

FORS 3960. Forest Resources Internship. 2 hours. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of major.

Work for sixty to ninety days on at least three different professional-level assignments with a business, government agency or other professional organization. Repeatable for maximum eight hours credit, but no more than two hours may be counted toward graduation.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

FORS 4000/6000-4000L/6000L. Forest Soil Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CRSS 3050-3050L or CRSS(FORS) 3060-3060L.

Corequisite: FORS 4010-4010L.

Morphological, physical, and chemical soil properties affecting tree growth and forest productivity; evaluation of soils and site quality; preparation of forest sites for planting, diagnosis, and correction of nutrient limitations; use of forest soil systems for waste treatment.

Non-Traditional Format: One Friday and one Friday-Saturday field trip are required.

Offered spring semester.

FORS 4010-4010L. Silviculture. 4 hours. Three lectures and one 5-hour lab period.

Prerequisite: FORS 3000-3000L and FORS 3020-3020L.

Theory and techniques of controlling regeneration, density, species composition, health, and quality of forest stands. Treatments studied include seeding and planting of tree species; thinning and regeneration cuts; and appropriate use of fire, pesticides, and fertilizers.

Offered fall and spring semesters.

FORS 4020/6020. Genetics and Breeding of Forest Trees. 3 hours.

Prerequisite: BIOL 1108-1108L.

Genetic variation in forest trees; harnessing natural variation and creating new variation to meet breeding objectives; biological and economic consequences of tree domestication; conservation of genetic resources.

Offered spring semester.

FORS 4030/6030. Regional Silviculture. 3 hours.

Prerequisite: FORS 4010-4010L.

Identification of the major forest regions of the United States and discussion of their silvicultural management.

Offered fall semester.

FORS 4060/6060-4060L/6060L. Field Ornithology. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: ECOL(FORS) 3260-3260L.

Bird identification, also emphasizing ecology, evolution, behavior, and field techniques.

Non-Traditional Format: Overnight field trip required.

Offered spring semester of odd-numbered years.

FORS 4110/6110. Forest Hydrology. 3 hours.

Prerequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Multidisciplinary examination of the terrestrial components of the hydrologic cycle focusing on the qualitative analysis of precipitation, snowmelt, runoff generation, routing, infiltration, and subsurface flow and transport. Emphasis is on the definition of hydrologic processes, identification of hydrologic resources, development of environmental monitoring techniques, and application to hydrologic resources management.

Offered spring semester.

FORS 4120/6120. Quantitative Methods in Hydrology. 3 hours.

Prerequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L or permission of school.

Advanced analysis of hydrologic processes to provide a theoretical understanding of precipitation, evapotranspiration, streamflow, groundwater occurrence and movement, and soil zone flow and transport. Emphasis is upon quantitative methods used in conjunction with field and laboratory data to identify flow and transport dynamics in hydrologic systems.

Offered fall semester.

FORS 4130L/6130L. Field Methods in Hydrology. 2 hours. Two 2-hour lab periods.

Prerequisite: Permission of school.

Prerequisite or corequisite: ENGR 3410 or CRSS(FORS) 3060-3060L or FORS 4110/6110 or GEOL 4220/6220 or GEOG 4030/6030 or CRSS 4600/6600-4600L/6600L. Field data acquisition methods to hydrologic systems are used to determine precipitation quantity and quality, evapotranspiration, streamflow, groundwater occurrence and movement, and soil zone transport processes. Physical and chemical measurements are coupled to determine flow paths, mass balances, and the environmental fate of solutes.

Offered spring semester.

FORS 4150. Environmental Systems. 2 hours.

Prerequisite: FORS 4120/6120 or permission of school.

Use of systems theory for environmental problems. Linear and nonlinear response to inputs using convolution and deconvolution. Applications include surface- and ground-water hydrologic and solute transport behavior. Problems related to land application of wastes and wetland processes will be addressed.

Offered spring semester.

FORS 4160/6160-4160L/6160L. Environmental Monitoring. 3 hours. Two lectures and one 3-hour lab period. Prerequisite: CRSS(FORS) 3060-3060L and STAT 2000. Design, implementation, and interpretation of sampling programs for environmental systems (especially aquatic systems) for monitoring, regulatory activities, quality control, scientific study, and impact assessment. Offered fall semester.

FORS 4300/6300-4300L/6300L. Management of Wildlife Habitat. 4 hours. Three lectures and one 4-hour lab period.

Prerequisite: [FORS 3020-3020L and FORS 3300] or permission of school.

Principles and practices related to the management of forested ecosystems for wildlife and biological diversity, with emphasis on habitat management at the stand and landscape level. Habitat management through use of appropriate silvicultural practices, wildlife enhancement techniques, and regulations is evaluated. Offered fall semester.

(FORS)ECOL 4310/6310-4310L/6310L. Limnology. 4 hours. Three lectures and one 4-hour lab period. Prerequisite: ECOL(BIOL) 3500-3500L or FORS 3300. Aquatic ecosystems (lakes and streams) and their biota. Linkages between terrestrial and aquatic ecosystems. Offered fall semester.

FORS 4320/6320. Wildlife Physiology and Nutrition. 3 hours.

Prerequisite or corequisite: FORS 3300 or permission of school.

An advanced course relating animal physiology and nutrition to wildlife ecology and management. Offered fall semester.

FORS 4330/6330-4330L/6330L. Water Quality Management in Fisheries and Aquaculture. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L.

Chemical and biological aspects of water quality, with emphasis upon relationships between water quality and fish production. Practical information on water quality management and related fields.

Offered fall semester.

FORS 4340/6340. Endangered Species Management. 3 hours.

Prerequisite: FORS(ECOL) 3580-3580L or FORS 3010-3010L or BTNY 4650/6650-4650L/6650L or permission of school.

Factors affecting extinctions and declines in biodiversity, including laws, policies, and management activities designed to protect species and critical habitats.

Offered fall semester of even-numbered years.

FORS 4370/6370-4370L/6370L. Fish Physiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: ECOL(FORS) 3260-3260L or permission of school.

Basic fish physiology with an emphasis on the effects of environmental stresses on physiological functions of fish.

Offered spring semester.

(FORS)MARS 4380/6380-4380L/6380L. Marine Fisheries Biology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L and permission of department.

Interaction of oceanographic processes with the life histories and productivity of marine fisheries species and the human interactions with major marine fisheries. Offered spring semester.

FORS 4500-4500L. Introduction to Wood Technology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 3500.

Material science of wood, including wood structure, physical/mechanical properties, and how wood products are affected by the material characteristics.

Offered fall semester.

FORS 4510-4510L. Processes in Wood Products Manufacturing. 3 hours. Two lectures and one 3-hour lab period.

Corequisite: FORS 4500-4500L.

Wood machining, drying, gluing, grading, and finishing.

Offered fall semester.

FORS 4570L/6570L. Practical Wood Identification. 2 hours. Two 2-hour lab periods.

Identification of domestic and commercial tropical woods.

Offered spring semester.

FORS 4610/6610-4610L/6610L. Forest Mensuration. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 3000-3000L and FORS 3610-3610L.

Direct measurement and indirect estimation of primary and secondary forest products. Measures of stand productivity, density, and growth.

Offered fall and spring semesters.

FORS 4620/6620. Timber Management. 3 hours.

Prerequisite: FORS 4610/6610-4610L/6610L.

Organization and management of forest properties for the production of commercial forest products.

Offered fall and spring semesters.

FORS 4630L/6630L. Computational Methods and Computer Models in Forestry. 2 hours. Two 2-hour lab periods.

Prerequisite: FORS 4610/6610-4610L/6610L.

Spreadsheets and forestry software packages to solve inventory and growth prediction problems.

Offered fall semester.

FORS 4640/6640-4640L/6640L. Forest Inventory. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 4610/6610-4610L/6610L.

Planning forest inventories and comparison of various equal and unequal probability sampling concepts; permanent and temporary forest sampling procedures; current stand and future growth estimation principles. Offered spring semester.

FORS 4710/6710-4710L/6710L. Quantitative Decision Methods for Forest Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: FORS 3610-3610L and FORS 3710-3710D.

Analysis methods applicable to forest management planning and decision making in forestry. Particular emphasis on optimization procedures and financial analysis.

Offered fall and spring semesters.

FORS 4730. Senior Project in Forest Resources Management. 4 hours. One lecture and one 1-hour lab period.

Not open to students with credit in FORS 4750.

Prerequisite: FORS 3710-3710D.

Advanced problems in forest resources management integrating all courses to date.

Non-Traditional Format: Remaining hours are scheduled by students to fulfill project requirements. Includes substantial field work.

Offered fall, spring, and summer semesters.

FORS 4750. Senior Thesis in Forest Resources. 4 hours.

Not open to students with credit in FORS 4730.

Prerequisite: Permission of school.

Supervised research integrating material from courses in the student's field of study. Written and oral presentation of research results and their significance.

Non-Traditional Format: Students may attend some lectures offered in Senior Project in Forest Resources Management. Students meet with thesis advisor on arranged basis. Students schedule own laboratory and field work.

Offered fall, spring, and summer semesters.

FORS 4800/6800-4800D/6800D. Forest Resources Policy. 3 hours. Two lectures and one 1-hour lab period.

Prerequisite: FORS 3710-3710D or permission of school.

Forest policy as a process, establishing forestry agendas, political decision models, political institutions and interest groups, policy in organizations, current issues.

Offered fall and spring semesters.

FORS 4900/6900-4900L/6900L. Wildlife Damage Management. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FORS 3300 or FORS (ECOL) 3580-3580L or permission of school.

Theory and practice of assessing and controlling damage done by wild and feral vertebrate animals, especially

mammals and birds. Emphasis is on protecting agricultural and forest crops and property.

Offered spring semester.

FORS 4910. Wildlife Management Issues. 3 hours.

Prerequisite: FORS 3300 or FORS (ECOL) 3580-3580L or permission of school.

Biological, social, and political aspects of wildlife management issues and their solutions.

Offered spring semester.

FORS 4920H. Honors Seminar in Natural Resources Ecology. 3 hours.

Prerequisite: [ECOL (BIOL) 3500-3500L or FORS 3020-3020L] and permission of school and permission of Honors.

Basic and applied ecological research, including scientific methodology, similarities and differences between basic and applied research, and specific topics (e.g., the relationship between environmental variation and biodiversity, population regulation in disturbed and undisturbed systems). Theoretical approaches to nature reserve design, randomness and pattern in natural systems.

Offered fall semester.

FORS 5010/7010. Urban Tree Management. 3 hours.

Prerequisite: BTNY 1210-1210L or BIOL 1104-1104L or BIOL 1108-1108L.

Establishment and maintenance of trees in urban environments. Nature and benefits of trees, planting, and soil management; pruning, repair, and protection; stress management; values of urban trees.

Offered spring semester.

FORS 5310/7310-5310L/7310L. Techniques in Wildlife Population Management. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: [FORS (ECOL) 3580-3580L and PGEN 3580-3580L] or permission of school.

Field and laboratory methods commonly used by professional wildlife ecologists to analyze and manipulate animal populations.

Offered spring semester.

FORS 5360/7360-5360L/7360L. Fisheries Management. 3 hours. Two lectures and one 4-hour lab period.

Prerequisite: BIOL 1108-1108L.

Principles, methods, and techniques used in the management of freshwater and marine fisheries resources. Practical, theoretical, and ethical questions are addressed.

Offered fall semester.

FORS 5380/7380-5380L/7380L. Fish Culture. 3 hours. Two lectures and one 4-hour lab period.

Prerequisite: BIOL 1108-1108L.

Biological and abiological aspects of extensive and intensive culture of freshwater fishes. Emphasis is on species and methods utilized in the eastern United States.

Offered spring semester.

FORS(RLST) 5400/7400-5400L/7400L. Park Management. 3 hours. Two lectures and one 2-hour lab period.

Management of public lands and open spaces, including management tools, type and nature of physical effects, visitor management principles, and site development. Use of maps, aerial photos, and compass in recreation area development.

Offered spring semester.

FORS 5410/7410. Wilderness Management. 3 hours. Origins of the wilderness movement; wilderness values; scope of wilderness management as limited by laws and philosophy; principles of wilderness management; and review status and management of non-roaded natural areas.

Offered spring semester.

FORS 5720/7720-5720L/7720L. Forest Harvesting and Roads. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: FORS 3000-3000L.

Prerequisite or corequisite: FORS 4010-4010L.

Techniques and systems for harvesting and roading forests. Production, cost, quality, safety, and environmental protection measures. Field exercises stress planning of harvesting and road construction operations to achieve desired objectives.

Offered fall semester.

FORS 5730/7730. Principles of Forest Management. 3 hours.

Prerequisite: BIOL 1104-1104L or BTNY 1210-1210L or permission of school.

Practical forestry in the South with emphasis on the management of private forest land. Topics include forest regeneration, tree identification and growth, basic measurements of tree crops. Not open to FRS majors. Offered spring semester of even-numbered years.

FORS 5740/7740. Forest Operational Planning. 3 hours.

Prerequisite: (FORS 3710-3710D and FORS 4010-4010L and FORS 4620/6620) or permission of school.

Integration of silviculture, finance, forest engineering, biometrics, and ecology to analyze industrial problems. Offered fall semester.

FORS 5750/7750. Procurement and Management of Wood Fiber Supply. 3 hours.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

Management of the wood fiber supply, program management functions, legal aspects and analysis of current issues in raw material management.

Offered spring semester.

FORS 5760/7760. Forest Products Marketing. 3 hours.

Prerequisite: (Enrollment in Professional Program of WSFR) or permission of school.

Planning, organizing, and managing forest products

marketing programs, domestically and internationally. Focus on developing marketing strategies and implementation of marketing plans in the context of forest industry structures and distribution channels.

Offered fall semester.

FORS 5820/7820. Natural Resources Law for Managers and Administrators. 4 hours.

Statutory, case law, and regulations concerning resource conservation, allocation, and development. Modern, systems-sensitive regulatory programs affecting natural resources administration analyzed. Examination of the division and nature of the functions of the judicial and executive branches of government.

Non-Traditional Format: Law library exercise requiring sixty or more hours per semester.

Offered spring semester.

FORS 5850/7850. Forest Policy Issues. 2 hours.

Prerequisite: POLS 1101-1101D or FORS 4800/6800-4800D/6800D.

Forestry issues and political processes. A general framework for analyzing current issues is developed and specific issues are analyzed each year.

Offered spring semester.

FORS 5920. Directed Readings or Projects in Forest Resources. 1-5 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of school.

Individual study, including readings, research, or other projects, in a specialized area of forest resources, under the supervision of a faculty mentor.

Non-Traditional Format: All work is done outside of a classroom setting.

Offered fall, spring, and summer semesters.

FORS 5930. Special Topics in Forest Resources. 1-4 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of school.

Special-interest or experimental courses offered on a one-time basis. Course content will vary with each offering.

Non-Traditional Format: Lecture/lab hours will be determined by course instructor as appropriate to topic and credit hours assigned.

Offered fall, spring, and summer semesters.

(FREN) French

College of Arts and Sciences, Department of Romance Languages

Certain courses in French are not open to native speakers. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was French.

FREN 1001. Elementary French. 4 hours.

Not open to students with credit in FREN 1002.

The French language and French-speaking cultures.

Open only to students who have fewer than two units of high school French. Emphasis is on conversational skills with attention to reading, writing, and listening comprehension. Work in the language laboratory. Offered fall, spring, and summer semesters.

FREN 1002. Elementary French. 4 hours.

Not open to students with credit in FREN 1110.

Prerequisite: FREN 1001.

A continuation of Elementary French. Emphasis is on conversational skills with attention to reading, writing, and listening comprehension. Work in the language laboratory.

Offered fall, spring, and summer semesters.

FREN 1110. Accelerated Elementary French. 4 hours.

Not open to students with credit in FREN 1001 or FREN 1002.

Accelerated course reviewing basic principles of the French language for students with some background of high school French.

Offered fall, spring, and summer semesters.

FREN 2001. Intermediate French. 3 hours.

Not open to students with credit in FREN 2002.

Prerequisite: FREN 1002 or FREN 1110.

Speaking, listening, reading, and writing French at the intermediate level. Pronunciation, conversation, grammar review, reading of texts and compositions. Not open to native speakers.

Offered fall, spring, and summer semesters.

FREN 2002. Intermediate French. 3 hours.

Not open to students with credit in FREN 2120H.

Prerequisite: FREN 2001.

Continuation of the basic curriculum of Intermediate French, with an emphasis on strengthening the speaking, listening, reading, and writing skills of the intermediate student. Pronunciation, conversation, grammar review, reading of texts and compositions. Not open to native speakers.

Offered fall, spring, and summer semesters.

FREN 2120H. Accelerated Intermediate French (Honors). 3 hours.

Not open to students with credit in FREN 2001 or FREN 2002.

Prerequisite: FREN 1002 and permission of Honors.

Course covers materials studied in Intermediate French. Emphasis on advanced readings and grammar review. Also prepares students to enter French Conversation and Composition. Not open to native speakers.

Offered fall semester.

FREN 2500. French for Reading Knowledge. 3 hours.

Grammar, idioms, and vocabulary; practice in translating moderately difficult technical and non-technical French. Intended to assist graduate students to satisfy reading knowledge requirement but does not carry graduate credit; not to be used to satisfy undergraduate language requirement; not open to French majors. Given in English.

Offered every year on a regular basis.

FREN 2950. Study Abroad in French. 3 hours.

Prerequisite: Permission of department.

French language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department.

Offered summer semester.

FREN 2960. Study Abroad in French. 3 hours.

Prerequisite: Permission of department.

French language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department.

Offered summer semester.

FREN 2970. Study Abroad in French. 3 hours.

Prerequisite: Permission of department.

French language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department.

Offered summer semester.

FREN 3010. French Conversation and Composition. 3 hours.

Prerequisite: FREN 2002 or permission of department.

The emphasis is divided between oral and written expression. Composition and conversation are integrated into the context of French and Francophone culture. Given in French. Not open to native speakers.

Offered fall and spring semesters.

FREN 3010H. French Conversation and Composition (Honors). 3 hours.

Not open to students with credit in FREN 3010.

Prerequisite: FREN 2002 and permission of Honors.

Practice in composition and conversation skills in French. Emphasis is divided equally between composition and conversation. Not open to native speakers. Given in French.

Offered every year on a regular basis.

FREN 3030. Introduction to French Literature. 3 hours.

Not open to students with credit in FREN 3030H.

Prerequisite: FREN 3010.

Selected French and Francophone texts in their social and linguistic contexts. Given in French.

Offered fall and spring semesters.

FREN 3030H. Introduction to French Literature (Honors). 3 hours.

Not open to students with credit in FREN 3030.

Prerequisite: FREN 2120H and permission of Honors.

Selected French and Francophone texts in their social and linguistic context. Given in French.

Offered every year on a regular basis.

French

FREN(LING) 3090. Introduction to French Linguistics. 3 hours.

Prerequisite: FREN 3010.

The field of French linguistics, emphasizing such topics as the internal and external history of French; the sounds, forms, and vocabulary of modern French; and the linguistic variation within France and the French-speaking world.

Offered every year on a regular basis.

FREN 4010. Advanced Conversation and Composition. 3 hours.

Prerequisite: FREN 3010.

Practice in composition and conversation skills in French, beyond French Conversation and Composition. Emphasis is divided equally between composition and conversation. Given in French. Not open to native speakers.

Offered every year on a regular basis.

FREN 4050. French Literature and Culture to 1700. 3 hours.

Prerequisite: FREN 3030 and FREN(LING) 3090.

French literature and culture from the Middle Ages through the seventeenth century. Topics include representations of feudal society; courtly texts and contexts; the rise of the nation-state; Renaissance humanism; the culture of absolute monarchy; the emergence of the French novel. Given in French.

Offered every year on a regular basis.

FREN 4060. French Literature and Culture 1700-1900. 3 hours.

Prerequisite: FREN 3030 and FREN(LING) 3090.

French literature and culture of the period covering the Enlightenment, the French Revolution, Romanticism, Realism, Naturalism, and "Belle Époque." Given in French.

Offered every year on a regular basis.

FREN 4070. French and Francophone Literature and Culture Since 1900. 3 hours.

Prerequisite: FREN 3030 and FREN(LING) 3090.

Major works, literary movements, and cultural background of the modern and contemporary periods, including the relationship between mainland France and other areas of the French-speaking world. Texts will include examples of poetry, prose, and drama. Given in French.

Offered every year on a regular basis.

FREN 4080. Studies in French Literature and Culture. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FREN 3030 and FREN(LING) 3090.

Topics in French and Francophone studies: themes, movements, problems, artistic and cultural manifestations and their relationship to literary and intellectual developments. Topics can cover individual periods or several centuries, depending on instructor. Given in French.

Offered every year on a regular basis.

FREN 4120/6120. Topics in French Culture, Language, and Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: FREN 3030 and FREN(LING) 3090.

Selected topics in French and Francophone culture, civilization, language, linguistics, literature, or literary theory. Given in French.

Offered summer semester.

FREN 4150. Business French. 3 hours.

Prerequisite: FREN 3010 and (FREN 3030 or FREN(LING) 3090 or ACCT 2101). Business students check with advisor for prerequisites.

French business and its environment. Topics might include creation of a business, banking, economic geography, interviewing, letter writing, advertising, communications, import-export, politics, the European Union. Given in French. Offered every year on a regular basis.

FREN(LING) 4630. French Phonetics. 3 hours.

Prerequisite: FREN(LING) 3090.

The French sound system in theory and practice. How French sounds are formed and how they reflect social class and geographical origin. Work on pronunciation in class and the language laboratory. Given in French.

Offered every year on a regular basis.

FREN 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

FREN 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

FREN 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

FREN 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors and senior standing.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered on a regular basis.

(GENE) Genetics

College of Arts and Sciences, Department of Genetics

GENE(BIOL) 3204. Genetics. 3 hours.

Prerequisite: (BIOL 1104-1104L or BIOL 1108-1108L) and BCMB(BIOL)(CHEM) 3100.

Genetic mechanisms in viruses, bacteria, and eukaryotic cells in a comparative sense. Topics include molecular genetics and gene action, transfer systems and mapping, cytological, quantitative, and population genetics.

Offered fall, spring, and summer semesters.

GENE 3214. Experimental Genetics. 3 hours.

Prerequisite: GENE(BIOL) 3204.

Drosophila, bacteria, phage and fungal systems for the analysis of mutation, transfer systems, mapping, complementation, population studies, and other genetic principles.

Offered fall semester.

GENE 4204/6204. Advanced Genetics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GENE(BIOL) 3204.

Prokaryotic, fungal, and mammalian genetic systems which form the basis of our understanding of molecular genetics. Techniques used in the analysis of the structure and function of viral and eukaryotic genomes. Offered on a regular basis.

GENE 4214L. Molecular Genetics Laboratory. 3 hours. Three 3-hour lab periods.

Prerequisite: GENE(BIOL) 3210 or (MIBO 3500 and GENE 4204/6204).

Lab techniques in molecular genetics for advanced undergraduate students. Basic genetic and recombinant DNA approaches in contemporary molecular biology: use of computers for database searches, DNA sequence analysis, and molecular modeling.

Offered spring semester.

GENE 4224. Computers in Experimental Genetics.

1 hour. Repeatable for maximum 10 hours credit.

Undergraduate computer course in Experimental Genetics.

Offered spring semester.

GENE(BIOL) 4604/6604. Evolutionary Biology. 3 hours.

Prerequisite: BIOL 1108-1108L.

An introduction to the processes of evolution. Topics include population genetics, speciation, systematics, coevolution, chemical origin of life, history of life, geological record, and evolution of humans.

Offered fall semester.

GENE 4954. Senior Seminar in Genetics. 1 hour.

Repeatable for maximum 3 hours credit.

Prerequisite: GENE(BIOL) 3204.

Undergraduate senior seminar class in Genetics.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall and spring semesters.

GENE 4964. Directed Reading and/or Projects. 1-5 hours. Repeatable for maximum 20 hours credit.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

GENE 4964H. Honors Readings Genetics. 3 hours.

Repeatable for maximum 9 hours credit.

Not open to students with credit in GENE 4964.

Prerequisite: GENE(BIOL) 3204 and permission of Honors.

Individual study, reading, or research projects under the direction of a faculty member.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

(GEOG) Geography

College of Arts and Sciences, Department of Geography

GEOG 1101-1101D. Introduction to Human Geography. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 2010H-2010D.

Global patterns of resources, population, culture, and economic systems. Factors contributing to these patterns and distinctions between the technologically advanced and less advanced regions of the world.

Offered fall, spring, and summer semesters.

GEOG 1103-1103D. Cultural Geography of the United States. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 2130H-2130D.

Geographic factors underlying multiculturalism and ethnic relationships in the United States. Spatial development and organization of culture; population growth, migration, and urbanization; and the spatial dimensions of political, economic, and social processes.

Offered spring semester.

GEOG 1111. Introduction to Physical Geography. 3 hours.

Not open to students with credit in GEOG 1112, GEOG 1113, or GEOG 2110H.

Spatial patterns and underlying processes of the physical environment and biosphere, including climate, vegetation, soils, landforms, and water resources.

Offered fall, spring, and summer semesters.

Geography

GEOG 1111L. Introduction to Physical Geography Laboratory. 1 hour. One 2-hour lab period.

Not open to students with credit in GEOG 1112L, GEOG 1113L, or GEOG 2110L.

Prerequisite or corequisite: GEOG 1111.

Optional laboratory for Introduction to Physical Geography.

Offered fall, spring, and summer semesters.

GEOG 1112. Introduction to Weather and Climate. 3 hours.

Not open to students with credit in GEOG 1111 or GEOG 2110H.

Atmospheric composition and structure, clouds, precipitation, and atmospheric motion and winds. Organized weather systems, including air masses, fronts, and severe weather. Discussion of global climates includes circulation, wind systems, climate classification, and climate change.

Offered fall, spring, and summer semesters.

GEOG 1112L. Introduction to Weather and Climate Laboratory. 1 hour. One 2-hour lab period.

Not open to students with credit in GEOG 1111L or GEOG 2110L.

Prerequisite or corequisite: GEOG 1112.

Optional laboratory for Introduction to Weather and Climate.

Offered fall, spring, and summer semesters.

GEOG 1113. Introduction to Landforms. 3 hours.

Not open to students with credit in GEOG 1111 or GEOG 2110H.

Analysis and classification of major types of land surfaces, stressing geographic characteristics. Interpretation of relationships between landforms and other phenomena through maps, air photos, and field observations. World coverage with emphasis on North America.

Offered fall, spring, and summer semesters.

GEOG 1113L. Introduction to Landforms Laboratory. 1 hour. One 2-hour lab period.

Not open to students with credit in GEOG 1111L or GEOG 2110L.

Prerequisite or corequisite: GEOG 1113.

Optional laboratory for Introduction to Landforms.

Offered fall, spring, and summer semesters.

GEOG 1125-1125D. Resources, Society, and the Environment. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 2250H-2250D. Interactions between physical systems and human activities, and their effects on environmental quality and sustainability. Geography of population and resource consumption, food production, water and air quality, energy policy, land/biotic resource management. Course may be taken through UGA Studies Abroad program in Verona.

Offered fall, spring, and summer semesters.

GEOG 2010H-2010D. Introduction to Human Geography (Honors). 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 1101-1101D. Prerequisite: Permission of Honors.

Global patterns of resources, population, culture, and economic systems. Factors contributing to these patterns and distinctions between the technologically advanced and less advanced regions of the world.

Offered fall or spring semester.

GEOG(ANTH)(CMLT)(HIST)(SOCI)2100. Introduction to Africa. 3 hours.

The history, physical environment (landforms, vegetation, and climate), and sociocultural environment (artistic, political, and social development) of Africa.

Offered fall or spring semester.

GEOG 2110H. Introduction to Physical Geography (Honors). 3 hours.

Not open to students with credit in GEOG 1111, GEOG 1112, or GEOG 1113.

Prerequisite: Permission of Honors.

Prerequisite or corequisite: GEOG 2110L.

Spatial patterns and underlying processes of the physical environment and biosphere, including climate, vegetation, soils, landforms, and water resources.

Offered fall or spring semester.

GEOG 2110L. Introduction to Physical Geography Laboratory (Honors). 1 hour. One 2-hour lab period.

Not open to students with credit in GEOG 1111L, GEOG 1112L, or GEOG 1113L.

Prerequisite or corequisite: GEOG 2110H.

Optional laboratory for Introduction to Physical Geography (Honors).

Offered fall or spring semester.

GEOG 2130H-2130D. Cultural Geography of the United States (Honors). 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 1103-1103D. Prerequisite: Permission of Honors.

Geographic factors underlying multiculturalism and ethnic relationships in the United States. Spatial development and organization of culture; population growth, migration, and urbanization; and the spatial dimensions of political, economic, and social processes.

Offered fall or spring semester.

GEOG 2250H-2250D. Resources, Society, and the Environment (Honors). 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in GEOG 1125-1125D. Prerequisite: Permission of Honors.

Interactions between physical systems and human activities and their effects on environmental quality and sustainability. Geography of population and resource consumption, food production, water and air quality, energy policy, land/biotic resource management.

Offered fall or spring semester.

GEOG 2300. Geographic Data Analysis. 3 hours.
Methods and techniques required at various stages of geographic data analysis, including the collection, manipulation, description, presentation, analysis, and interpretation of data. Exercises using statistical and GIS software packages on microcomputers integrate data analysis with geographic information systems. Offered fall or spring semester.

GEOG 2610. Geography of Georgia. 3 hours.
Physical, cultural, economic, historical, and biological landscapes of Georgia, explored through videos, music, and computerized data sets, such as the Interactive Atlas of Georgia and the Georgia 100 GIS. Offered fall or spring semester.

GEOG 3010. General Geomorphology. 3 hours.
Prerequisite: (GEOG 1111 and GEOG 1111L) or (GEOG 1113 and GEOG 1113L) or (GEOG 2110H and GEOG 2110L) or GEOL 1250-1250D.
Earth surface processes and landforms, including tectonic, volcanic, weathering, soil, hillslope, karst, fluvial, glacial, periglacial, eolian, and coastal geomorphic systems. Relevance to environmental change is stressed. Field trip required. Offered fall or spring semester.

GEOG 3110. Climatology. 3 hours.
Prerequisite: (GEOG 1111 and GEOG 1111L) or (GEOG 1112 and GEOG 1112L) or (GEOG 2110H and GEOG 2110L).
Climatology from local to global scales. Topics include radiation/heat exchanges, the hydrologic cycle, global climate patterns, climate change, measurement and data sources, relationships of climate with ecosystem processes and human activities, climate forecasting and use of the Internet. Offered fall or spring semester.

GEOG 3210. Biogeography. 3 hours.
Prerequisite: (GEOG 1111 and GEOG 1111L) or (GEOG 1112 and GEOG 1112L) or (GEOG 2110H and GEOG 2110L).
Factors affecting plant and animal distributions at scales from organisms to biomes. Influence of ecological factors and human activity on distributions, historical biogeography, and patterns of earth's biomes. Offered fall or spring semester.

GEOG 3510-3510L. Cartography and Graphics. 3 hours. Two lectures and one 2-hour lab period.
Prerequisite: GEOG 2300.
Map design techniques including cartographic theory and principles, map interpretation, map database preparation, compilation, symbolization, computer mapping, map reproduction techniques, color, and thematic map design. Offered fall or spring semester.

GEOG 3620. Introduction to Economic Geography. 3 hours.
Prerequisite: GEOG 1101-1101D or ECON 2105.
Location factors and principles utilizing theoretical and empirical studies. Focus upon the spatial organization of economic production, consumption, and exchange systems. Offered fall or spring semester.

GEOG 3630. Introduction to Urban Geography. 3 hours.
Prerequisite: GEOG 1101-1101D.
Theories of inter- and intraurban locations. Procedures in geographical analysis of agglomerated settlements, including demographic, economic, and social attributes. Offered fall or spring semester.

GEOG 3990. Internship in Geography. 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of department.
Placement of students in an outside private or governmental agency where they will utilize geographic techniques in approaching practical problems relevant to the agency's mission. An initial orientation and a postinternship evaluation with the internship committee are required.
Non-Traditional Format: Internship.
Offered fall, spring, and summer semesters.

GEOG 4020/6020. Fluvial Geomorphology. 3 hours.
Prerequisite: GEOG 3010.
Landforming effects of surface-water movement with emphasis on surface-water hydrology, streamflow mechanics, floods, sediment transport and storage, and landform evolution. Field trips included. Offered fall or spring semester.

GEOG 4030/6030. Geomorphology and Environmental Change in Karst and Arid Environments. 3 hours.
Prerequisite: GEOG 3010 or (GEOG 1113 and GEOG 1113L) or GEOL 1250-1250D.
Weathering, erosional and depositional processes, and landforms in karst and arid areas. Formation of sinkholes, sinking streams, caves, springs, sand dunes, playas, and yardangs. Geoarchaeological and other evidence on the nature of past environments, including dating cave and aeolian sediments. Field trips included. Offered fall or spring semester.

GEOG 4040/6040. Global Environmental Change During the Quaternary. 3 hours.
Prerequisite: GEOG 3010.
Chronology and geomorphic, isotopic, and palynological evidence of Quaternary paleoclimates. The effects of past climatic changes upon present landscapes, historic short-term fluctuations in temperature and precipitation, and possible explanations for climatic change are emphasized. Offered fall or spring semester.

Geography

GEOG 4060/6060. Field and Laboratory Methods in Physical Geography. 3 hours.

Prerequisite: GEOG 3010 or GEOG 3110 or GEOG 3210. Methods in measurement, observation, recording and synthesis of field data in physical geography. Students conduct field research and present oral and written reports (with maps) of findings. Offered fall or spring semester.

GEOG 4120/6120. Synoptic Meteorology/Climatology. 3 hours.

Prerequisite: GEOG 3110.

Theory and observations to understand mid-latitude weather systems. Focus is on application of quasi-geostrophic theory in weather forecasting. Analysis and interpretation of weather maps and numerical models will be used to examine atmospheric dynamics and thermodynamics.

Offered fall or spring semester.

GEOG 4140/6140. Satellite Climatology. 3 hours.

Prerequisite: (GEOG 1111 and GEOG 1111L) or (GEOG 1112 and GEOG 1112L) or (GEOG 2110H and GEOG 2110L).

Satellite remote sensing in climatology, including climatologies of clouds, atmospheric water vapor and precipitation, the Earth's radiation budget, sea and land surface temperatures, and the cryosphere and vegetation.

Offered fall or spring semester.

GEOG 4160/6160. Applied Climatology. 3 hours.

Prerequisite: GEOG 3110.

The interaction of climate with organisms, communities, and ecosystems. Mechanisms of heat flow, radiation exchanges and water vapor flux; statistical methods used with climatic data; bioclimatic methods used to improve environmental impact assessment; and case studies that demonstrate the role of climate in ecosystem function.

Offered fall or spring semester.

GEOG(BTNY) 4220/6220. Ecological Biogeography. 3 hours.

Prerequisite: GEOG 3210 or ECOL(BIOL) 3500-3500L.

Patterns of plant distribution in contemporary landscapes and underlying processes, including vegetation dynamics, disturbance ecology, biogeomorphology, dendrochronology, and environmental history.

Offered fall or spring semester.

GEOG(BTNY) 4240/6240. Plant Geography. 3 hours.

Prerequisite: BIOL 1104-1104L and (GEOG 1112 and GEOG 1112L) and [GEOG 3210 or ECOL(BIOL) 3500-3500L].

Phytogeographical zonation, plant-geographic processes, and current potential natural vegetation. Includes physical and environmental factors, plant-environment relationships, plant roles and types, vegetation dynamics, geographic responses to disturbance,

and vegetation of main world biomes. Emphasis on global-scale patterns and relationships.

Offered fall or spring semester.

GEOG 4300/6300. Introductory Spatial Analysis. 3 hours.

Prerequisite: GEOG 2300.

Descriptive and inferential techniques used in quantitative geographic analysis. Probability distributions, sampling techniques, parametric and nonparametric inference, analysis of variance, spatial autocorrelation measures and regression procedures. Applications of statistical methods to spatial analysis and geographic research design. Exercises develop knowledge of statistical programming with computer software.

Offered fall or spring semester.

GEOG 4310/6310. Cartography Design and Reproduction. 3 hours.

Prerequisite: GEOG 3510-3510L or permission of department.

Design, examination of cartographic literature, map production methods, and their effects on design. Practical applications of desktop publishing, page layout with specific emphasis on state atlas design, map-narrative interactions, four color map reproduction, and photo-cartographic techniques.

Offered once every two years.

GEOG 4330/6330-4330L/6330L. The Use and Interpretation of Aerial Photographs. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Principles and techniques of extracting descriptive and metric information about the environment from aerial photographs acquired in analog and digital forms. Applications emphasize planimetric mapping and interpretation of physical and cultural landscapes. A term project using the techniques is required.

Offered fall or spring semester.

GEOG 4350/6350-4350L/6350L. Remote Sensing of Environment. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4330/6330-4330L/6330L.

Remote sensing with emphasis on aerospace applications in the natural sciences. Fundamental properties of the electromagnetic spectrum and remote sensing devices such as multispectral cameras, thermal infrared line scanners, and television and radar imaging systems.

Offered fall or spring semester.

GEOG 4370/6370-4370L/6370L. Introduction to Geographic Information Systems. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CSCI 1301-1301L or sophomore standing or permission of department.

Principles and applications of geographic information systems (GIS). Examines the nature and accuracy of spatially referenced data, as well as methods of data

capture, storage, retrieval, visualization, modeling, and output using one or more GIS software packages.
Offered fall, spring, and summer semesters.

GEOG 4410/6410-4410L/6410L. Cartographic Visualization Methods. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 3510-3510L.

Theory and application of computer technology in the preparation of thematic maps and graphics. Emphasis on the creation, analysis, and display of statistical surfaces. Students explore trends in cartographic visualization methods, including interactive and animated mapping techniques.

Offered fall or spring semester.

GEOG 4430/6430-4430L/6430L. Advanced Photogrammetry. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4330/6330-4330L/6330L.

Theories of analytical and digital (soft copy) photogrammetry as applied to topographic mapping. Topics include refinement of photographic measurements, coordinate transformations, stereoscopic parallax, collinearity equations, aerial triangulation, orthophotography, and digital image correlation.

Offered fall or spring semester.

GEOG 4470/6470-4470L/6470L. Geographic Analysis and Geographic Information Systems. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOG 4300/6300 and GEOG 4370/6370-4370/6370L and CSCI 1302.

Geographic analytical methods and implementation. Theory and concepts of spatial analysis. Description, reduction, and comparison of point, line, area, and volumetric geographic data sets. Implementation and limitation of geographic information systems.

Offered fall or spring semester.

GEOG 4610/6610. Location Analysis. 3 hours.

Prerequisite: GEOG 3620.

The geography of retail activity and consumer demand. Principles of locational decision-making for retail and service firms.

Offered fall or spring semester.

GEOG 4620/6620. Advanced Economic Geography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 3620.

Advanced theoretical and empirical issues in economic geography, such as impacts of globalization, regional development, trade patterns, and labor issues. Topics will vary.

Offered fall or spring semester.

GEOG 4630/6630. Advanced Urban Geography. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GEOG 3630.

Urban growth and approaches to urban analysis. Urbanization processes within urban systems, including

economic, demographic, social, and technological change.

Offered fall or spring semester.

GEOG 4640/6640. Population Geography. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The distribution of world population and an introduction to population data and to basic demographic techniques. Topics include theories of population change, fertility, mortality, migration, population policy, and population-environment relationships.

Offered fall or spring semester.

GEOG 4650/6650. Industrial Geography. 3 hours.

Prerequisite: GEOG 3620.

The regional basis of economic growth and industry case studies. The impact of product and process innovation, entrepreneurship, globalization, and the service economy on the spatial distribution of industry.

Offered fall or spring semester.

GEOG 4660/6660. Urban and Regional Development. 3 hours.

Prerequisite: GEOG 3620.

Regional development and the implications of globalization to regional economies of the industrialized countries. Discussions on the changing dynamics of international competition and the reorganization of production. Contemporary trends in regional economic development policy, including high technology and service-sector development.

Offered fall or spring semester.

GEOG 4670/6670. Geography of Development. 3 hours.

Prerequisite: GEOG 3620.

Geographical aspects of Third World development, including population growth, migration, industrialization, trade, and foreign aid. The spatial characteristics of economic development are viewed at the conceptual level and implications for policy discussed.

Offered fall or spring semester.

GEOG 4710/6710. Geography of Sub-Saharan Africa. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

Geographic and socio-economic issues that face sub-Saharan economies into the twenty-first century. Emphasis on the physical landscape, environmental conditions, social and cultural distributions, and strategies and theories of economic development.

Offered fall or spring semester.

GEOG 4720/6720. Geography of South America. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The geography of equatorial and southern South America, including physical, cultural, and economic characteristics of different regions. Prospects for expansion of settlement, development of resources, and growth of industries.

Offered fall or spring semester.

Geography / Geology

GEOG 4730/6730. Geography of China. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630 or permission of department.

The physical and human geography of contemporary China. Emphasis is on modernization and development of agriculture, industry, and transportation within the context of China's resource base and large population. Offered fall or spring semester.

GEOG 4740/6740. Geography of East and Southeast Asia. 3 hours.

Prerequisite: GEOG 3620 or GEOG 3630.

The physical and human geography of East and Southeast Asia. Major focus on resources, land utilization, population characteristics and distributions as they relate to economic and political problems. Emphasis is on Japan, Korea, Indonesia, Philippines, and Indo-China.

Offered fall or spring semester.

GEOG 4810/6810. Conservation Ecology and Resource Management. 3 hours.

Prerequisite: GEOG 1125-1125D.

Ecological and economic analysis of human use of global and regional resources, emphasizing ecological requirements, sustainable use, and holistic decision-making. Topics include ecosystem dynamics, functional biodiversity, landscape management, socioeconomic traps, global change, and ecological restoration. Offered fall or spring semester.

GEOG 4920/6920. Special Problems in Area Analysis. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent research and readings on geographical topics by arrangement with specific faculty.

Non-Traditional Format: Class hours are by arrangement with the relevant faculty and vary depending on credit hours.

Offered fall, spring, and summer semesters.

GEOG 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director for senior Honors students.

Non-Traditional Format: Directed study.

Offered on a regular basis.

GEOG 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director for senior Honors students.

Non-Traditional Format: Directed study.

Offered on a regular basis.

GEOG 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major or related field for a senior Honors student.

Non-Traditional Format: Directed study.

Offered on a regular basis.

(GEOL) Geology

College of Arts and Sciences, Department of Geology

GEOL 1121. Earth Processes and Environments. 3 hours.

Not open to students with credit in GEOL 1121H, GEOL 1250-1250L, or GEOL 2350H.

Earth processes and utilization of geological materials (plate tectonics, earthquakes, volcanism, hydrology, erosion). Earth hazards, pollution, and energy resources in the context of environmental geology.

Offered fall, spring, and summer semesters.

GEOL 1121L. Earth Processes and Environments Laboratory. 1 hour. One 2-hour lab period.

Not open to students with credit in GEOL 1250-1250L or GEOL 2350H.

Corequisite: GEOL 1121 or GEOL 1121H.

Description and identification of minerals and rocks. Interpretation of topographic and geological maps. Identification and interpretation of surficial and structural geologic features. Quantitative evaluation of hydrologic and environmental problems.

Offered fall, spring, and summer semesters.

GEOL 1121H. Earth Processes and Environments (Honors). 3 hours.

Not open to students with credit in GEOL 1121, GEOL 1250-1250L, or GEOL 2350H.

Prerequisite: Permission of Honors.

Earth processes and utilization of geological materials (plate tectonics, earthquakes, volcanism, hydrology, erosion). Earth hazards, pollution, and energy resources in the context of environmental geology.

Offered fall semester.

GEOL 1122. Earth's History of Global Change. 3 hours.

Not open to students with credit in GEOL 1122H, GEOL 1260-1260L, or GEOL 2360H.

Geologic record of global change, including measurement of geologic time, global geochemical cycles, sea-level and climate change, biodiversity, evolution, ecological changes and extinctions.

Offered fall, spring, and summer semesters.

GEOL 1122L. Earth's History of Global Change Laboratory. 1 hour. One 2-hour lab period.
Not open to students with credit in GEOL 1260-1260L or GEOL 2360H.

Corequisite: GEOL 1122 or GEOL 1122H.
Description, identification, and interpretation of sedimentary structures and the fossil remains of organisms. The physical evidence of evolution and climatic change throughout geologic time. Interpretation of geologic features and processes.
Offered fall, spring, and summer semesters.

GEOL 1122H. Earth's History of Global Change (Honors). 3 hours.
Not open to students with credit in GEOL 1122, GEOL 2360H, or GEOL 1260-1260L.
Prerequisite: Permission of Honors.
Geologic record of global change, including geologic time, global geochemical cycles, sea-level and climate change, biodiversity, evolution, ecological changes and extinction.
Offered fall semester.

GEOL 1250-1250L. Physical Geology. 4 hours. Three lectures and one 2-hour lab period.
Not open to students with credit in GEOL 1121 or GEOL 2350H.
Physical geology; characteristics and origins of rocks and minerals; mechanism and processes of volcanism, plutonism, metamorphism, weathering, erosion, sedimentation, and lithification; evolution of landforms. Tectonic processes of continental drift, sea-floor spreading, and plate tectonics. Emphasis on scientific methods.
Offered fall semester of even-numbered years.

GEOL 1260-1260L. Historical Geology. 4 hours. Three lectures and one 2-hour lab period.
Not open to students with credit in GEOL 1122, GEOL 1122H, or GEOL 2360H.
Methods and concepts by which Earth history is interpreted. The geologic time scale; interactions of physical, chemical, and biological processes through time. Origin of life; evolution and distribution of plants and animals through time. Geologic history of North America. Emphasis on interpretation of the rock record.
Offered fall and spring semesters.

GEOL 2120. Introduction to Environmental Geology. 3 hours. Two lectures and one 1-hour lab period.
Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L.
Environmental geology focusing on understanding global and current environmental problems and their relationships with geological processes. Emphasis on case histories of geologic hazards and environmental impact of resources extraction and use. Requirements for a sustainable society analyzed.
Non-Traditional Format: During discussion period students will discuss readings, discuss environmental

situations and their solution, and give presentations on subjects they have researched. Emphasis is on research, analysis, and problem solving.
Offered fall and spring semesters.

GEOL 2350H. Physical Geology (Honors). 4 hours. Three lectures and one 2-hour lab period.
Not open to students with credit in GEOL 1121, GEOL 1121H, or GEOL 1250-1250L.
Prerequisite: Permission of Honors.
Characteristics and origins of minerals and rocks. Plate tectonics and structure of the Earth's interior. Geologic processes that affect the Earth's surface: volcanism, earthquakes, coastal erosion, and global climate changes. Natural Earth resources and human interaction. Course may be taken through UGA Studies Abroad program in GASFP.
Non-Traditional Format: During Summer semester this course will be taught in the field as part of the Geology, Anthropology Summer Field Program. Extensive field observations and projects will be included in addition to organized lecture and laboratory work.
Offered summer semester.

GEOL 2360H. Historical Geology (Honors). 4 hours. Three lectures and one 2-hour lab period.
Not open to students with credit in GEOL 1260-1260L.
Prerequisite: GEOL 2350H and Permission of Honors.
Measurement of geologic time. Physical and biological history of Earth as recorded in rocks and fossils. Development of the major features of the Earth, with particular emphasis on North America. Course may be taken through UGA Studies Abroad program in GASFP.
Non-Traditional Format: Course taught during summer session in the field. Traditional methods are combined with field exercises and problems, interpretive exercises, and extensive field discussions.
Offered on a regular basis.

GEOL 3010-3010L. Earth Materials. 4 hours. Two lectures and two 2-hour lab periods.
Prerequisite: CHEM 1211 and CHEM 1211L.
Physical and chemical properties, identification, and modes of occurrence of minerals and mineral assemblages. Mineral crystallography, determinations of optical properties with the petrographic microscope, x-ray diffraction and structural formula determinations. Introduction to mineral thermodynamic phase relations.
Offered fall semester.

GEOL 3020-3020L. Surficial and Near-Surficial Processes. 4 hours. Three lectures and one 2-hour lab period.
Prerequisite: (GEOL 1121 and GEOL 1121L and GEOL 1122 and GEOL 1122L) or GEOL 1260-1260L.
Surface processes; geohydrological, geochemical cycles; and surface geologic structures of the Earth.
Offered spring semester.

GEOL 3030. Elementary Oceanography. 3 hours.

Basic aspects of oceanography: ocean basins and plate tectonics, shallow and deep ocean circulation, waves and tides, marine biology and ecology, marine sediments, chemistry of seawater, paleoceanography, and environmental oceanography.
Offered spring semester.

GEOL 3090. Gems and Gem Materials. 3 hours.

Gem materials, historical, cultural, mineralogical, technological, and scientific aspects. The identification and evaluation of gems.
Offered fall semester of even-numbered years.

GEOL 3120-3120L. Geological Hazards. 3 hours. Two lectures and one 2-hour lab period.

Consequences of potentially hazardous geologic processes, including volcanic activity, earthquakes, landslides, flooding, shoreline erosion, and ground failure. Emphasis on developing understanding of the underlying geologic processes that result in hazards and delineating risk potential. Evaluation of methods of prediction and methods of damage control through laboratory analysis of case studies.
Offered spring semester of odd-numbered years.

GEOL 3130. Geology of the National Parks. 3 hours. Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L or permission of department.

Geological features of selected national parks used as type examples for understanding rock forming processes (igneous, sedimentary, and metamorphic) and orogenic processes. Exploitation of mineral resources in and around national parks and conflicts that ensue.
Offered spring semester.

GEOL 3150. Coastal Processes and Conservation. 3 hours. Two lectures and one 2-hour lab period.

The major physical and biological processes which characterize marine coastal habitats. Emphasis is on developing an understanding of the complex interdependency within various environments, and evaluating the responses to natural and human-induced disturbances. Discussion of stabilization vs. conservation issues and environmental effects of private and governmental attempts at risk mitigation.
Offered spring semester of even-numbered years.

GEOL 3200. Rocks and Minerals. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: [(GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L] and CHEM 1211 and CHEM 1211L.
Basic properties, origins, and methods of describing and classifying the common minerals and rocks. Emphasis on identifying and describing samples on the hand specimen and outcrop scale.
Non-Traditional Format: Field trips required.
Offered spring semester.

GEOL 3250. Earth Resources and the Environment. 3 hours.

Distribution of mineral and energy resources; present and future problems of mineral supply; conservation of minerals; mineral resources in relation to national and international policy; environmental impact of mineral/energy resource extraction and use.
Offered fall semester of even-numbered years.

GEOL 3300. Paleobiotas. 3 hours.

The earth's major biotas throughout geologic history. Emphasis on ecology, environmental change, and mass extinction events.
Offered spring semester of odd-numbered years.

GEOL 3350. Dinosaurs - Lifestyles of the Big and Famous in the Mesozoic. 3 hours.

Dinosaur dinners, dates, dallying, and domiciles (or dinosaur habitats and eating, reproductive, and social behavior). Warm-bloodedness versus cold-bloodedness. Relationship to birds, reptiles, and mammals. Evolutionary patterns. Extinction and asteroids. Climate, sea level, and continents during the Mesozoic Era.
Offered spring semester of odd-numbered years.

GEOL 4010-4010L. Life, Environment, and Ecologies of the Past. 4 hours. Two lectures and two 3-hour lab periods.

Prerequisite: (GEOL 1122 and GEOL 1122L) or GEOL 1260-1260L.
Prerequisite or corequisite: GEOL 3010-3010L.
Principles of paleobiology and stratigraphy, including sedimentary structures, facies models, sequence stratigraphy, biostratigraphy, paleoecology, taphonomy, and macroevolutionary dynamics.
Offered fall semester.

GEOL 4020-4020L. Internal Earth Processes. 4 hours. Three lectures and one 3-hour lab period.

Prerequisite: GEOL 3010-3010L.
Internal processes which are responsible for the formation and deformation of the earth. Study of the basic tools of igneous and metamorphic petrology, structural geology, and geophysics and their application in field and laboratory investigations.
Offered spring semester.

GEOL 4050/6050. Facies Models and Stratigraphy. 3 hours.

Prerequisite: GEOL 4010-4010L.
Sedimentary processes in major siliciclastic and carbonate depositional environments. Factors affecting deposition and erosion of sediments on time scales of hundreds of years to hundreds of thousands of years.
Offered fall semester.

GEOL 4060/6060. Structural Geology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 4020-4020L.
Stress and strain within the earth, and the mechanical properties and behavior of earth materials. Geologic

structures, their recognition and interpretation in the field, and solution of structural problems. Framework of the earth's crust; evolution of mountain belts, continents, and basins. Relation between structures, deformation, and plate tectonics.

Offered spring semester.

GEOL 4090/6090. Marine Geology. 3 hours.

Prerequisite: (GEOL 1122 and GEOL 1122L) or GEOL 1260-1260L.

The geologic aspects of ocean basins, including morphology, sedimentation processes, and mode of origin.

Offered spring semester.

GEOL 4110/6110. Principles of Geochemistry. 3 hours.

Prerequisite: (CHEM 1212 and CHEM 1212L and GEOL 3010-3010L) or permission of department.

Distribution of elements and isotopes in minerals, rocks, and waters. Principles governing the migration and behavior of elements and isotopes.

Offered fall semester.

GEOL 4220/6220. Hydrogeology. 3 hours.

Groundwater in the hydrologic cycle. Examination of flow through porous media, regional flow, influence of wells, water chemistry, and contaminant transport. Emphasis on practical environmental problems.

Offered fall semester.

GEOL 4250/6250. Field Methods in Geology. 2 hours.

One lecture and one 3-hour lab period.

Prerequisite: GEOL 3010-3010L.

Prerequisite or corequisite: GEOL 3020-3020L.

Field measurement of geologic parameters, accurate recording of observations, production and interpretation of geologic maps and cross sections, and the recognition of structures and lithologies in the field. Non-Traditional Format: Two day weekend field trips are required.

Offered spring semester.

GEOL 4270/6270. Geology Field School. 12 hours.

Prerequisite: GEOL 3020-3020L or GEOL 4010-4010L or GEOL 4020-4020L or GEOL 4250/6250.

Theory and practice of field measurement, large scale planimetric and topographic mapping, and grid surveying. Graphic presentation of field data. Geologic mapping projects, including interpretation of observed geologic features. Summary maps and reports must be prepared and defended in the field. Student must demonstrate mastery of the knowledge and skills taught in the required on-campus major courses. Course may be taken through UGA Studies Abroad program in Geology Field School.

Non-Traditional Format: Taught in the field during the summer term. Instructional methods include lectures, demonstrations, field trips, as well as supervised field study.

Offered summer semester.

GEOL 4300/6300. Igneous and Metamorphic Petrology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4020-4020L.

Textures, mineralogy, and classification of the common igneous and metamorphic rocks. Origin of magmas and volcanoes and their impact on civilizations; evolutions of continental and oceanic crusts; metamorphic rocks as probes of crustal processes.

Offered fall semester.

GEOL 4310/6310. Economic Geology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: GEOL 4020-4020L.

Classification and origin of base and precious metal ore deposits; relationships between ore deposits, host rocks, and plate tectonics; principles of ore deposit exploration and evaluation.

Offered spring semester of even-numbered years.

GEOL 4330/6330. Geology of North America. 3 hours.

Prerequisite: GEOL 1260-1260L.

Evolution of North American continent through time. Stratigraphic, sedimentary, and magmatic history and tectonic development of various regions since the early Precambrian. Paleontological record of environmental and biological changes. Origin of energy, mineral, soil, and water resources. History of human habitation and resource utilization. Current environmental hazards and challenges.

Offered spring semester of even-numbered years.

GEOL (ANTH) 4340/6340. Archaeometry. 3 hours.

Prerequisite: GEOL (ANTH) 4700/6700.

Methods of archaeometric analysis including chronometric and instrumental techniques. Absolute age dating and characterization of archaeological materials by physico-chemical analysis.

Offered fall semester of even-numbered years.

GEOL 4350/6350. Geology of the Planets and Moons. 3 hours.

Prerequisite: GEOL 3020-3020L and GEOL 4020-4020L.

Geology of the planets, moons, and asteroids, including internal, surficial, and atmospheric processes. Studies in comparative planetology aimed at showing how unique the current life-supporting environment of the Earth is, and why other planets have undergone such dramatically different evolutions.

Offered fall semester of odd-numbered years.

GEOL 4370/6370. Data Analysis in the Geosciences. 3 hours.

The principles of data analysis, including data collection methods, graphical presentation, and basic statistics.

Offered fall semester of even-numbered years.

Geology

GEOL 4410/6410. Introduction to Research in Archeogeology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to Archeo-geology.

Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4420/6420. Introduction to Research in Geochemistry. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to geochemistry.

Non-Traditional Format: Taught as a directed study, although traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4430/6430. Introduction to Research in Geophysics. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to geophysics.

Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4440/6440. Introduction to Research in Hydrogeology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to hydrogeology.

Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4450/6450. Introduction to Research in Mineralogy. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to mineralogy.

Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be employed when appropriate.

Not offered on a regular basis.

GEOL 4460/6460. Introduction to Research in Paleontology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to paleontology.

Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4470/6470. Introduction to Research in Petrology. 1-3 hours. Repeatable for maximum 9 hours credit. The literature, research procedures, and instrumental techniques applicable to petrology.

Non-Traditional Format: Taught as a directed study, but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4480/6480. Introduction to Research in Sedimentary Geology. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques appropriate to sedimentation and stratigraphy.

Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4490/6490. Introduction to Research in Structure/Tectonics. 1-3 hours. Repeatable for maximum 9 hours credit.

The literature, research procedures, and instrumental techniques applicable to structural geology and/or tectonics.

Non-Traditional Format: Taught as a directed study but traditional lecture and lab exercises may be utilized when appropriate.

Not offered on a regular basis.

GEOL 4500/6500. Sedimentary Petrology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 3010-3010L.

Mineralogical, petrological, and geochemical study of sedimentary rocks (shales, sandstones, limestones, dolostones, cherts, evaporites, phosphorites, etc.) to interpret origins of sedimentary grains and to understand porosity and permeability of water/rock interaction in and diagenesis of sedimentary rocks.

Offered spring semester of even-numbered years.

GEOL 4510/6510. Marine Micropaleontology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: GEOL 4010-4010L.

Geologic history and applications of marine microfossils, especially foraminifera, calcareous nannoplankton, radiolaria, and diatoms.

Offered fall semester of odd-numbered years.

GEOL 4520/6520. Paleocology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: (GEOL 1260-1260L and GEOL 3300) or permission of department.

The ecological factors affecting the distribution and abundance of fossil organisms, with emphasis on marine invertebrates. Invertebrates as a guide to environments of the past and as indicators of environmental change. Taphonomy of invertebrates.

Offered spring semester of odd-numbered years.

GEOL 4550/6550. Clay Mineralogy and Geochemistry. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: GEOL 3010-3010L.

Clay minerals with emphasis on x-ray diffraction analysis and identification of mixed layer systems. Geochemical factors for clay origin and uses including applications to soils, petroleum, archeological, environmental and economic ore deposit studies.

Offered spring semester of odd-numbered years.

GEOL 4560/6560. Weathering and Diagenesis. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: CHEM 1211 and CHEM 1211L and GEOL 3020-3020L.

Global cycling of major elements. Rock-water interactions. Kinetics of mineral dissolution and growth in soil, marine, freshwater, sedimentary basins and hydrothermal systems. Geochemical models for estimating reaction rates and reservoir capacities/fluxes are considered.

Offered spring semester of even-numbered years.

GEOL 4600/6600. Solid Earth Geophysics. 3 hours. Prerequisite: GEOL 4020-4020L and MATH 2200, 2200L.

Analysis of Earth's gravity, magnetic, and seismic wave fields applied to the investigation of structure and dynamics of the Earth's interior. Course will cover theory, methods of analysis, and results of geophysical investigations. Emphasis on major new initiatives in satellite geodesy and digital seismic array studies.

Offered fall semester.

GEOL 4620/6620. Exploration Geophysics. 3 hours. Prerequisite: GEOL 4020-4020L and MATH 2200, 2200L.

Geophysical methods for imaging the subsurface. Course will focus on gravity, magnetic, resistivity, seismic refraction, and seismic reflection surveys. Applications discussed include exploration for hydrocarbons and characterization of the shallow subsurface for engineering/groundwater studies. Laboratory will include field experiments and computer modeling studies.

Offered spring semester.

GEOL 4640/6640. Geochemical and Geophysical Surveys. 3 hours.

Prerequisite: GEOL 3010-3010L.

Prerequisite or corequisite: GEOL 4020-4020L.

Geochemical dispersion and survey of common pathfinder elements; methods of instrumental analysis used in geochemical exploration. Background theory of gravity, magnetic, electromagnetic, and electrical techniques used in resource exploration. Field based projects.

Offered spring semester of odd-numbered years.

GEOL 4660/6660. Field School in Shallow Geophysics. 6 hours.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L or permission of department.

Techniques for the geophysical prospecting of near-surface geology, geohydrology, and geomorphology.

Techniques include electro-magnetic, radar, sonar, and magnetism.

Non-Traditional Format: Course taught during summer semester utilizing applied field exercises in addition to traditional lecture/lab methods.

Offered summer semester.

GEOL 4670/6670. Environmental Instrumental Analysis. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: CHEM 1212 and CHEM 1212L.

Lecture and laboratory course emphasizing principles and practical experience in chemical analysis of sediments, rocks and water, with particular emphasis on environmentally important organic and inorganic contaminants.

Non-Traditional Format: Field trip participation required.

Offered spring semester.

GEOL (ANTH) 4700/6700. Archaeological Geology. 3 hours.

Prerequisite: (GEOL 1121 and GEOL 1121L) or GEOL 1250-1250L.

Archaeological geology examines the use of earth science methods and theories in the study of archaeological sites and their contents. The four major areas covered include: (1) the archaeological site and geology; (2) age determination techniques; (3) exploration techniques; (4) artifact characterization.

Offered spring semester.

GEOL 4750/6750. Earth Sciences for Middle School Teachers. 3 hours. Two lectures and one 2-hour lab period.

Fundamentals of earth sciences for middle school teachers. Map interpretation; minerals and rocks; principles of astronomy, meteorology and oceanography. Processes at the surface and inside the Earth. Emphasis on plate tectonics; geologic time scale, evolution of life, and a study of fossils. Geology and resources of Georgia.

Offered fall semester.

GEOL 4900/6900. Seminar in Geohydrology. 1 hour.

Repeatable for maximum 6 hours credit.

Current and classical studies in geohydrology.

Offered fall and spring semesters.

GEOL 4910/6910. Seminar in Geochemistry. 1 hour.

Repeatable for maximum 6 hours credit.

Current and classical studies in geochemistry.

Offered spring semester.

GEOL 4960H. Directed Reading and/or Projects (Honors). 3-4 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

GEOL 4970H. Directed Reading and/or Projects (Honors). 3-4 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

GEOL 4980H. Directed Reading and/or Projects (Honors). 3-4 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

GEOL 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Students in this course meet with their supervising professor as needed to successfully complete assignments and readings.

Offered fall, spring, and summer semesters.

(GREEK) Greek

College of Arts and Sciences, Department of Classics

GREK 1001. Elementary Greek I. 4 hours.

Not open to students with credit in GREK 2050.

The grammar, reading, and translation of Classical Attic Greek.

Offered fall semester.

GREK 1002. Elementary Greek II. 4 hours.

Not open to students with credit in GREK 2060.

Prerequisite: GREK 1001.

The grammar, reading, and translation of Classical Attic Greek, continued from Elementary Greek I.

Offered spring semester.

GREK 2001. Intermediate Greek I. 3 hours.

Prerequisite: GREK 1002 or GREK 2060.

Review of Classical Attic Greek grammar, as needed, plus selected readings in Herodotus and Euripides.

Offered fall semester.

GREK 2002. Intermediate Greek II. 3 hours.

Prerequisite: GREK 2001 or permission of department.

Selected readings in Homer and Plato.

Offered spring semester.

GREK 2050. Intensive Elementary Greek I. 4 hours.

Not open to students with credit in GREK 1001.

Corequisite: GREK 2060.

The pronunciation, grammar, reading, and translation of Classical Attic Greek.

Offered summer semester of odd-numbered years.

GREK 2060. Intensive Elementary Greek II. 4 hours.

Not open to students with credit in GREK 1002.

Prerequisite: GREK 2050.

A continuation of Intensive Elementary Greek I.

Offered summer semester of odd-numbered years.

GREK 4010/6010. Homer. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selections from the *Iliad* and/or the *Odyssey*.

Not offered on a regular basis.

GREK 4020/6020. Hesiod. 3 hours.

Prerequisite: GREK 2002 or permission of department.

Study of Hesiod's two surviving poems, the *Theogony* and the *Works and Days*, with special attention to the relationship of his language and religious thinking to that of Homer.

Not offered on a regular basis.

GREK 4030/6030. Greek Lyric Poets. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selected Greek elegy and lyric, with attention to its political and social background, and to the relation of these literary types to epic and dramatic poetry.

Not offered on a regular basis.

GREK 4040/6040. Thucydides. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

The Peloponnesian War through selected readings.

Not offered on a regular basis.

GREK 4050/6050. Aeschylus. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Aeschylus' plays, with emphasis on his theology and special uses of the Greek language.

Not offered on a regular basis.

GREK 4060/6060. Sophocles. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Sophocles' plays, with emphasis on the poet's religious and humanistic values and his dramatic style.

Not offered on a regular basis.

GREK 4070/6070. Euripides. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Euripides' plays, with emphasis on the poet's dramatic style and his treatment of social, political, and religious themes.

Not offered on a regular basis.

GREK 4080/6080. Aristophanes. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GREK 2002 or permission of department.

Selected comedies of Aristophanes. Emphasis is placed on language, style, and thought, and on the generic characteristics of Greek Old Comedy.

Not offered on a regular basis.

GREK 4090/6090. Advanced Readings: Plato. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: GREK 2002 or permission of department. The dialogues of Plato. Emphasis is placed on the language, style, and philosophical thought of Plato. Not offered on a regular basis.

GREK 4100/6100. Attic Orators. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: GREK 2002 or permission of department. Orations drawn from the works of Demosthenes, Lysias, and Aeschines, with emphasis on the function and techniques of persuasion in oratory and on the political and social contexts of these orations. Not offered on a regular basis.

GREK 4200/6200. Readings in Selected Greek Authors. 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: GREK 2002 or permission of department. Selected Greek authors to be chosen according to the interests of students and instructor. Not offered on a regular basis.

(GRMN) German

College of Arts and Sciences, Department of Germanic and Slavic Languages

GRMN 1001. Elementary German I. 4 hours.
Fundamentals of grammar, pronunciation, conversation, reading, and translation. Additional language laboratory work required.
Offered fall and spring semesters.

GRMN 1002. Elementary German II. 4 hours.
Prerequisite: GRMN 1001.
A continuation of Elementary German I.
Offered fall and spring semesters.

GRMN 1140H. Elementary German (Honors). 4 hours.
Not open to students with credit in GRMN 1001 or GRMN 1002.
Prerequisite: Permission of Honors.
A combination of Elementary German I and Elementary German II.
Offered every year on a regular basis.

GRMN 2001. Intermediate German I. 3 hours.
Prerequisite: GRMN 1002.
Grammar, reading, and translation of intermediate texts, composition, and conversation. Additional language laboratory work may be required.
Offered fall and spring semesters.

GRMN 2002. Intermediate German II. 3 hours.
Prerequisite: GRMN 2001.
Readings in modern German prose, composition, and conversation. Additional language laboratory work may be required.
Offered fall and spring semesters.

GRMN 2140H. Intermediate German (Honors). 3 hours.
Not open to students with credit in GRMN 2001 or GRMN 2002.

Prerequisite: GRMN 1002 and permission of Honors.
Intensive readings in modern German literature and culture, composition, and conversation. Additional language laboratory work may be required.
Offered every year on a regular basis.

GRMN 3010. German Conversation and Composition I. 3 hours.
Prerequisite: GRMN 2002.

Broad and deep coverage of syntax and vocabulary in both the spoken and written language. Oral and written practice, original compositions, and selected readings in German culture and literature.
Offered every year on a regular basis.

GRMN 3020. German Conversation and Composition II. 3 hours.
Prerequisite: GRMN 3010.

Increasingly advanced coverage of syntax and vocabulary in both spoken and written language. Oral and written reports, original compositions, and selected readings in German culture and literature.
Offered every year on a regular basis.

GRMN 3060. Business German. 3 hours.
Prerequisite: GRMN 2002.
Introduces business students to the German language through an approach that emphasizes conversational skills and business terms. Acquaints students with the German environment as it relates to business.
Offered every year on a regular basis.

GRMN 3100. German Culture and Literature. 3 hours.
Prerequisite: GRMN 3010.
The interrelationship between German culture (history, art, philosophy, music) and literature from the eighteenth century to the present.
Offered every year on a regular basis.

GRMN 3200. German Landeskunde. 3 hours.
Prerequisite: GRMN 3010.
The Federal Republic of Germany since reunification, with emphasis on geography, political, social, education and cultural institutions, within the framework of recent change from a homogeneous to a multicultural society.
Offered every year on a regular basis.

GRMN 3250. Survey of German Literature from the Beginnings to the Enlightenment. 3 hours.
Prerequisite: GRMN 3010.
Reading and analysis of representative German works from the Old High German and Middle High German periods, Humanism, the Reformation, the Renaissance, and the Baroque.
Offered every year on a regular basis.

German

GRMN 3260. Survey of German Literature from the Enlightenment to the Present. 3 hours.

Prerequisite: GRMN 3010.

Reading and analysis of representative German works of the Enlightenment, Storm and Stress, Classicism, Romanticism, Realism and the major literary movements of the twentieth century.

Offered spring semester.

GRMN(LING) 3380. Contrastive Grammar of English and German. 3 hours.

Prerequisite: GRMN 2002.

Contrastive analysis of German and English phonology and grammar. Prepares future teachers of German to identify pedagogically important structural differences between English and German.

Offered every year on a regular basis.

GRMN 3500. Techniques of Translation. 3 hours.

Review of grammar, idioms, and vocabulary; practice in translating moderately difficult technical and non-technical German texts into correct English. Does not apply to the major or minor in German or language certificates. Satisfies language requirement for graduate students. Offered every year on a regular basis.

GRMN 3600H. Heroic Literature (Honors). 3 hours.

Prerequisite: Permission of Honors.

The oldest northern European medieval literary movements studied as historical remnants from the Age of Migrations to the Viking period, with influences from mythology and folklore. Taught in English.

Not offered on a regular basis.

GRMN 4010/6010. Advanced German Conversation and Composition. 3 hours.

Prerequisite: GRMN 3020.

Vocabulary building and review of grammar. Emphasis on common errors of English speakers and on distinctions in meaning.

Offered fall semester.

GRMN 4300/6300. German Literature from the Enlightenment through Classicism. 3 hours.

Prerequisite: GRMN 3010.

Eighteenth-century German literature and culture from approximately 1740-1806. Representative readings from Enlightenment, Empfindsamkeit, Storm and Stress, and Classicism. Includes texts that provide background on eighteenth-century political, social, and cultural developments.

Offered on a regular basis.

GRMN 4400/6400. German Literature from Romanticism through Realism. 3 hours.

Prerequisite: GRMN 3010.

Nineteenth-century German literature and culture from approximately 1795-1900. Representative readings from early to late Romanticism, Junges Deutschland, Vormärz, Biedermeier, and Realism. Includes texts that provide background on nineteenth-century political,

social, and cultural developments.

Offered on a regular basis.

GRMN(LING) 4460/6460. Structure of Modern German. 3 hours.

Prerequisite: GRMN 3010.

Linguistic and sociolinguistic structure of modern German with relevant linguistic terminology. Emphasis on phonology, morphology, and syntax. Taught in English.

Offered every year on a regular basis.

GRMN 4500/6500. German Literature from Naturalism to the Present. 3 hours.

Prerequisite: GRMN 3010.

Twentieth-century German literature from approximately 1895 to the present. Representative readings from Naturalism, Impressionism, Expressionism, wartime and post-war literature, literature of the GDR, and contemporary literature through post-unification. Includes texts that provide background on twentieth-century political, social, and cultural developments.

Offered every year on a regular basis.

GRMN 4510. Special Topics in German Literature or Linguistics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GRMN 3010.

Intensive reading and study of a genre (poetry, drama, Novelle), period, movement, theme, or topic.

Offered every year on a regular basis.

GRMN 4520. Senior Seminar. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: GRMN 3020 and permission of department.

Capstone course for German majors, minors, and advanced students. Selected topics in German literature and culture. Required for German majors.

Offered every year on a regular basis.

GRMN 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: GRMN 3010 and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

GRMN 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: GRMN 3010 and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

GRMN 4990H. Honors Thesis. 3 hours.

Prerequisite: GRMN 3010 and permission of Honors.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

(HACE) Housing and Consumer Economics

*College of Family and Consumer Sciences,
Department of Housing and Consumer Economics*

HACE 2100. Family Economic Environment. 3 hours.
The family as a producing and consuming unit, including the decision-making processes involved and the special role of housing. Emphasis is on interrelationships among decisions and the links between economic and social issues.
Offered fall and spring semesters.

HACE 3000. Family Resource Management. 3 hours.
Individual and family management, including value orientation, decision-making, and creation and utilization of resources. Special emphasis placed on application of concepts to unique managerial situations encountered in day-to-day living.
Offered spring semester.

HACE 3010. Directed Study in Housing and Consumer Economics. 3 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of department.
Designed for the senior major to permit independent study and research.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

HACE 3100. Introductory Consumer Economics. 3 hours.
Concepts underlying consumer economics. Emphasis is on the consumer in the marketplace, consumer choice, information search, consumer protection, including redress and consumer affairs as a profession.
Offered fall and spring semesters.

HACE 3150. Consumer Decisions: Home and Market. 3 hours.
Prerequisite: ECON 2106.
Theories of consumer and household decision making. Applications of economic theories to basic issues confronting consumers in the marketplace. Family economic models and theories of household time allocation.
Offered fall and spring semesters.

HACE 3200. Intermediate Family Financial Management. 3 hours.
Prerequisite: HACE 2100.
Cash flow management and consumption expenditures, credit and debt, simple applications of personal income taxes, risk management, property and health insurance, and employee benefits. A variety of case studies with different household compositions will be used to provide practical applications on each topic. Computer applications will be used with some topics.
Offered fall and spring semesters.

HACE 3300. Housing in a Contemporary Society. 3 hours.

Prerequisite: HACE 2100.

Present-day family housing needs from the standpoint of health, safety, environment, finance, ownership, types of dwellings, and minimum standards. Basic terms and concepts to establish a foundation for other Housing and Consumer Economics housing classes.
Offered fall and spring semesters.

HACE 4100/6100. Family Economic Behavior and Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 3150.

The family as an income producing and time allocating unit. Theory and applications of the economics of household decision making. The family as the supplier and demander of economic inputs and outputs. The interrelationship between demographic and economic family characteristics and well-being.
Offered spring semester.

HACE 4200/6200. Advanced Family Financial Management. 3 hours.

Prerequisite: Undergraduate level only: HACE 3200.

Personal income taxes, life insurance, disability insurance, liability insurance, savings and investment, retirement planning, and estate planning.
Offered fall semester.

HACE 4300/6300. Advanced Housing Theories. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Sociological and economic theories of housing consumption and production in housing markets, including basic concepts of housing needs, quality, norms and satisfaction. Economic theories relating to characteristics of housing and capital markets, including primary and secondary mortgage markets and alternative financing.
Offered fall semester.

HACE 4310/6310. Housing Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Housing policies at the federal, state, and local levels as they relate to current housing markets. Barriers and incentives for housing development activities created by regulations, finance, and taxation. The role of public/private initiatives in the provision of housing.
Offered fall semester.

HACE 4350/6350. Household Technology and Systems. 3 hours. Two lectures and one 2-hour lab period.

Technological devices and their use within the household, including mechanical and electrical systems, home automation, universal design, regulation, and national appliance standards.

Offered spring semester.

Housing and Consumer Economics

HACE 4400/6400. Family Demographics and Policy. 3 hours.

Prerequisite: Undergraduate level only: HACE 2100 or SOCI 1101.

Basic concepts and measurement issues of family demography, including migration, income, marriage, and divorce; implications of family structural characteristics for public policies.

Offered fall semester.

(HACE)CHFD 4500/6500. Second Half of Life. 3 hours.

Prerequisite: Junior standing or permission of department.

Second half of life; resource management, living patterns, and housing, sexuality, roles, family relationships, community and organization involvement, and career opportunities.

Offered spring semester of odd-numbered years.

HACE 4900/6900. Seminar in Housing and Consumer Economics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Selected topics and problems in housing and consumer economics.

Not offered on a regular basis.

HACE 4960H. Directed Reading and/or Projects (Honors). 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

HACE 4970H. Directed Reading and/or Projects (Honors). 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

HACE 4980H. Directed Reading and/or Projects (Honors). 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

HACE 4990H. Honors Thesis. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Individual research in the major field.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

HACE 5100/7100. Consumer Protection. 3 hours.

Prerequisite: Undergraduate level only: HACE 3150.

Consumer rights and responsibilities in the private and public sector of the economy. Relationship of government, nonprofit, and corporate response to consumer problems, legislation concerning consumer information, product safety, and choice of goods and channels of appeal for the consumer.

Offered fall semester.

HACE 5150/7150. Consumers' Market Environment. 3 hours.

Prerequisite: Undergraduate level only: HACE 3100 and HACE 3150.

The consumer marketplace in terms of the welfare of the consumer. Actions of consumers with changing marketplace, institutions, and government policies.

Offered spring semester.

HACE 5200/7200. Family Financial Counseling. 3 hours.

Prerequisite: Undergraduate level only: HACE 3200.

Indicators, causes, and impact of family financial problems on the family's well-being. Topics covered include credit difficulties, repossessions, liens, garnishments, and bankruptcy.

Non-Traditional Format: Students are required to work on a regular basis with families in financial difficulty.

Offered fall semester.

HACE 5250/7250. Family Financial Planning. 3 hours.

Prerequisite: HACE 4200/6200.

Advanced financial topics and development of a comprehensive financial plan. Regulation, certification, and legal and ethical requirements for financial planners.

Offered spring semester.

HACE 5350/7350. Housing Counseling. 3 hours.

Prerequisite: Undergraduate level only: HACE 3300.

Basic information for certification as a Professional Housing Counselor. Includes basic techniques for housing, budget, and tenancy counseling.

Offered spring and summer semesters.

HACE 5710/7710. Study Tour in Housing and Consumer Economics. 3-12 hours. Repeatable for maximum 12 hours credit.

Prerequisite: Permission of department.

Topics relating to housing or consumer economics, with site visits to relevant locations. Combines in-depth study with first-hand experience gained on site.

Non-Traditional Format: Lecture, tour, and other activities for the length of the program.

Not offered on a regular basis.

HACE 5900/7900. Professional Seminar and Internship Orientation. 1 hour.

Orientation to an internship experience.

Offered fall, spring, and summer semesters.

HACE 5910/7910. Housing and Consumer Economics Internship. 3-15 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department.

Supervised work experience in housing, consumer economics, or consumer journalism.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

(HEBR) Hebrew

College of Arts and Sciences, Department of Religion

HEBR 1001. Elementary Biblical Hebrew I. 4 hours.

A study of classical Hebrew grammar.

Offered fall semester.

HEBR 1002. Elementary Biblical Hebrew II. 4 hours.

Prerequisite: HEBR 1001.

A continuation of Elementary Biblical Hebrew I.

Offered spring semester.

HEBR 2003. Intermediate Biblical Hebrew I. 3 hours.

Prerequisite: HEBR 1002.

Classical Hebrew grammar with reading of selected texts from the Hebrew Bible/Old Testament.

Offered fall semester.

HEBR 2004. Intermediate Biblical Hebrew II. 3 hours.

Prerequisite: HEBR 2003.

Readings of Hebrew texts selected from the Hebrew Bible/Old Testament, Dead Sea Scrolls, or early rabbinic literature.

Offered spring semester.

HEBR 4100/6100. Reading and Research in Hebrew Literature. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: HEBR 2004 or permission of department. Directed study in reading and research in classical Hebrew literature.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

HEBR 4960H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

HEBR 4970H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

HEBR 4980H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

HEBR 4990H. Honors Thesis. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

(HIPR) Historic Preservation

School of Environmental Design

HIPR 4000/6000. Introduction to Historic Preservation. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: Permission of school.

Historic preservation theory, its evolution and practice, and its relationship to the concept of environmental quality.

Offered fall semester.

(HIST) History

College of Arts and Sciences, Department of History

HIST 2050H. Multicultural America (Honors). 3 hours. Not open to students with credit in HIST 2051 or HIST 2052.

Prerequisite: Permission of Honors.

United States history from a multicultural and multiethnic perspective. Examines the roles Native Americans, European Americans, African Americans, Hispanic Americans, and Asian Americans have played in the making of America. The course begins in seventeenth-century Virginia and continues to the present.

Offered every year on a regular basis.

HIST 2051. Multiculturalism in Early America. 3 hours.

The multicultural reality of the American experience from the 1600s through the 1800s by examining the complex interactions of people of diverse races, ethnicities, classes, and gender in forging the American nation.

Offered every year on a regular basis.

HIST 2052. Multiculturalism in Modern America. 3 hours.

United States history since 1865 from a multicultural and multiethnic perspective. The course will emphasize

History

social, cultural, and political dimensions of the American experience, paying particular attention to issues of race and ethnicity. Highlights the contributions of the many different peoples who make up America. Offered every year on a regular basis.

(HIST)GEOG(ANTH)(CMLT)(SOCI) 2100. Introduction to Africa. 3 hours.

The history, physical environment (landforms, vegetation, and climate), and sociocultural environment (artistic, political, and social development) of Africa. Offered fall semester.

HIST 2111. American History to 1865. 3 hours.

American society, politics, thought, institutions, and economic life from the first settlements to the end of the Civil War.

Offered fall and spring semesters.

HIST 2111H. United States Survey to 1865 (Honors). 3 hours.

Not open to students with credit in HIST 2111.

Prerequisite: Permission of Honors.

United States survey at the honors level will deal more thematically than the regular survey with a variety of issues in American history from its founding through the Civil War. Emphasis on primary sources and research and writing, often with a seminar format.

Offered every year on a regular basis.

HIST 2112. American History Since 1865. 3 hours.

Not open to students with credit in HIST 2112H.

Development of the American nation from 1865 to the present.

Offered every year on a regular basis.

HIST 2112H. History of the United States 1865 to Present (Honors). 3 hours.

Not open to students with credit in HIST 2112.

Prerequisite: Permission of Honors.

The major political, economic, social, and cultural changes in the United States from reconstruction to the present.

Offered every year on a regular basis.

HIST 2221. Latin American Civilization to 1800. 3 hours.

Amerindian, Iberoamerican, and Caribbean history and culture from pre-encounter times to 1800.

Offered every year on a regular basis.

HIST 2222. Latin American Civilization Since 1800. 3 hours.

Latin American and Caribbean history and culture from 1800 to the present.

Offered every year on a regular basis.

HIST 2301. History of Western Society to 1500. 3 hours.

The major ideas and images that make up the foundation of modern western society. The origin and formation of

Judaism, Christianity, and Islam. The growth of ideas of law and political philosophy.

Offered every year on a regular basis.

HIST 2302. History of Western Society Since 1500. 3 hours.

Western society from the Renaissance to the present day, emphasizing ideas, culture, and social change.

Offered every year on a regular basis.

HIST 2311H. Western Society to 1500 (Honors). 3 hours.

Not open to students with credit in HIST 2301.

Prerequisite: Permission of Honors.

The social, political and economic developments in the west to 1500 A.D.

Offered every year on a regular basis.

HIST 2312H. Western Society Since 1500 (Honors). 3 hours.

Not open to students with credit in HIST 2302.

Prerequisite: Permission of Honors.

Integrating social, cultural, and political history, this course includes such topics as religion, changing social structures and gender identities, industrialization, revolution and the rise of nationalism, Europe and the world, modern wars and mass political movements.

Non-Traditional Format: Taught as a seminar with extensive readings in primary and secondary sources.

Offered every year on a regular basis.

HIST 2501. Introduction of African History to Sixteenth Century. 3 hours.

Cultural history of Africa to sixteenth century. Origins of agriculture, rise and growth of complex societies and states, spread and importance of Islam, slavery and diaspora issues.

Offered every year on a regular basis.

HIST 2502. Survey of African History After 1600. 3 hours.

The social, political, and economic development of Sub-Saharan African societies and their assimilation of non-African peoples, their ideas, and materials culture after 1600. African and European objectives intertwined and contradicted. Transformations after 1600 were a continuation of those precipitated by trade, migration, conquest, religion, and innovation.

Offered every year on a regular basis.

HIST 2560. The Middle East Since 1914. 3 hours.

Not open to students with credit in HIST 3570H.

History of the Middle East from World War I to the present, focusing on political, religious, cultural, and economic circumstances.

Offered on a regular basis.

HIST 2601. East Asian Civilizations I. 3 hours.

Historical, religious, political, economic, and social traditions of East Asia, from prehistory to the seventeenth century, emphasizing political and cultural interaction within the region.

Offered every year on a regular basis.

HIST 2602. East Asian Civilizations II. 3 hours.

Historical, religious, political, economic, and social traditions of East Asia, from the seventeenth century to the present, emphasizing political and cultural interaction within the region.

Offered every year on a regular basis.

HIST 2701. World Civilizations I. 3 hours.

The human community from ancient times to A.D. 1500, focusing on the interrelations of societies and cultures and comparing the experiences of peoples and civilizations with one another.

Offered every year on a regular basis.

HIST 2702. World Civilizations II. 3 hours.

The human community from A.D. 1500 to the present, focusing on the interrelations of societies and cultures and comparing the experiences of peoples and civilizations with one another.

Offered every year on a regular basis.

HIST 3020. United States Foreign Relations Since 1914. 3 hours.

A survey of American foreign relations since 1914.

Offered on a regular basis.

HIST 3030. History of Canada. 3 hours.

The history of Canada from European settlement to the present day. Special attention will be given to political, constitutional, and economic developments.

Offered on a regular basis.

HIST 3060. Colonial and Revolutionary America. 3 hours.

Native American, African, and European interactions; warfare, labor systems, cultures, and societies; empire building and colonial political structures; the American Revolution and the formation of the United States.

Offered on a regular basis.

HIST 3071. Origins of Modern America. 3 hours.

Economic, social, diplomatic, and political trends in the United States, 1877-1917.

Offered on a regular basis.

HIST 3072. The United States Between the Wars, 1914-1945. 3 hours.

The shifting patterns of political, economic, cultural, and social development in the United States as the nation confronted prosperity, depression, and war.

Offered on a regular basis.

HIST 3073. Modern America, 1945 to Present. 3 hours.

Social, economic, diplomatic, and political trends in the United States during the post-World War II era.

Offered every year on a regular basis.

HIST 3080H. America and the World (Honors). 3 hours.

Prerequisite: Permission of Honors.

Selected aspects of United States relations with the world in the twentieth century.

Offered on a regular basis.

HIST 3090. The American South. 3 hours.

Major themes and issues in southern history from Jamestown through the 1980s. Topics will include colonial settlement, frontier expansion, slavery, the Civil War and Reconstruction, Populism, Jim Crow, the New South, the civil rights movement, and Sunbelt development.

Offered on a regular basis.

HIST 3101. The Early African American Experience. 3 hours.

The African background of African Americans, the institution of slavery, the development of the African American community institutions, and African American participation in and impact on the Civil War and Reconstruction.

Offered every year on a regular basis.

HIST 3102. Modern African American Experience. 3 hours.

The twentieth-century struggle for civil rights, black identity, and self-determination. The response to industrialism and urbanization. The role of black institutions and political organizations. The philosophy and tactics of accommodation, integration, and separatism.

Offered every even-numbered year on a regular basis.

(HIST)RELI 3150. Religion in the United States. 3 hours.

Prerequisite: Junior standing or permission of department.

The significant developments in American religious history and thought from Puritanism to the present with attention to the social and cultural contexts in which various religious movements arose.

Not offered on a regular basis.

HIST 3220. History of Mexico. 3 hours.

Mexican history and culture from pre-Columbian times to the present.

Offered on a regular basis.

HIST 3230. History of Brazil. 3 hours.

Brazilian history and culture from pre-Columbian times to the present.

Offered on a regular basis.

HIST 3240. The Caribbean Area. 3 hours.

The islands and Caribbean periphery from pre-Columbian times to the present. European intrusion and settlement, plantation societies and economies, slavery and slave rebellion, nineteenth- and twentieth-century political and economic developments, and United States policy. Approximately one-third of the course will focus on the period after World War II.

Offered on a regular basis.

History

HIST 3250. History of the Americas. 3 hours.

The Western hemisphere from pre-Columbian times, with emphasis on social and economic development and the evolution of political cultures from the American Revolution to the present.
Offered on a regular basis.

HIST 3310. Ancient History. 3 hours.

The political and economic world from the Stone Age to the end of the Western Roman Empire in 476 A.D.
Offered on a regular basis.

HIST 3321. History of Women in the Ancient World. 3 hours.

The history of women in many of the ancient civilizations of the Mediterranean and Middle East. The social, religious, and political roles played by women of different classes within the patriarchal framework of these societies. Emphasis will be placed on the reading and discussion of primary sources.
Offered on a regular basis.

HIST 3323. History of Women in Early Modern Europe. 3 hours.

The experiences, challenges, and achievements of women in early modern Europe. Perceptions of women—religious, literary, political, and social. Through such study, we can learn more both about women and about how society functioned and responded to change.
Offered every year on a regular basis.

HIST 3324. History of Women in Modern Europe. 3 hours.

The experiences, challenges, and achievements of women in modern Europe. Perceptions of women—religious, literary, political, and social. Through such study, we can learn more both about women and about how society functioned and responded to change.
Offered on a regular basis.

HIST 3330. The Medieval World. 3 hours.

Medieval Europe from 476 to the fall of Constantinople in 1453. The rise of the Catholic Church to its dominance of thirteenth-century Europe and the struggle of kings with their feudal values will be discussed against the backdrop vs. ravages of the Inquisition and the Black Death.
Offered on a regular basis.

HIST 3332. Wenchies, Witches, Damsels and Nuns: Women in Medieval Europe. 3 hours.

The ideas about and images of women throughout the medieval period. The issues of political, economic, and social rights of women of different classes. The presence of misogyny will be questioned.
Offered on a regular basis.

HIST 3340. The Age of Renaissance and Reformation. 3 hours.

The two great intellectual movements of early modern Europe: the Renaissance and the Reformation. The

religious and social context in which the developments associated with these movements took place, as well as their impact on European society.
Offered on a regular basis.

HIST 3350. The Age of Absolutism: Rulers, Subjects Citizens. 3 hours.

The rise of the modern European state and its impact on society and culture from 1600 to 1789. Themes include kingship and state formation, popular revolt, aristocratic culture, Enlightenment social thought, and the collapse of the Old Regime.
Offered on a regular basis.

HIST 3361. Europe's Revolutionary Century, 1789-1900. 3 hours.

The history of Europe from 1789 to 1900, emphasizing political and social change, the spread of revolutionary ideas, and the rise of nation states.
Offered on a regular basis.

HIST 3362. Twentieth-Century Europe. 3 hours.

Major political, economic, social, and cultural developments.
Offered on a regular basis.

HIST 3371. Tudor-Stuart England. 3 hours.

English history in the sixteenth and seventeenth centuries. Course may be taken through UGA Studies Abroad program in Oxford.
Offered on a regular basis.

HIST 3372. English History Since 1660. 3 hours.

English history from the Restoration to the present. Emphasis will be on political and cultural change as well as economic and imperial development.
Offered on a regular basis.

HIST 3381. Old Regime and Revolutionary France 3 hours.

French history from the sixteenth to the late eighteenth century. Peasant life, social hierarchy, religious conflict, the politics and culture of Absolutism, the Enlightenment, the fall of the Old Regime, and the French Revolution.
Offered on a regular basis.

HIST 3382. Modern France Since 1799. 3 hours.

French social and political history in the nineteenth and twentieth centuries. Processes of urbanization and industrialization in the nineteenth century and French political and cultural development in the twentieth century.
Offered on a regular basis.

HIST 3390. Germany Since 1789. 3 hours.

Germany from 1789 through the Revolutions of 1848. German unification, the Wilhelminian Reich, World War I, the Weimar Republic, the Third Reich, World War II, division, and reunification.
Offered on a regular basis.

HIST 3400. Modern Italy. 3 hours.

The eighteenth-century beginnings of the movement for unification to the present, with particular emphasis on the distinctiveness of the Italian experience in culture, society, and politics.

Offered on a regular basis.

HIST 3411. Russia to the Great Reforms. 3 hours.

Traces rise of Russian state from Kievan Rus through Tsardom of Nicholas I. High points include Mongol legacy, rise of Muscovy, the "Time of Troubles," and creation of modern state structure by Peter I (The Great). Final focus is on nineteenth-century reform beginnings and rise of revolutionary movement.

Offered on a regular basis.

HIST 3412. Modern Russia: Revolution, the USSR, and Aftermath. 3 hours.

Stresses Alexander II's reforms and subsequent Tsarist policies plus parallel advance of the revolutionary movement to the 1917 Bolshevik takeover. Post-1917 coverage emphasizes Leninist-Stalinist contributions and subsequent modifications culminating with Gorbachev period. Ends with 1991 Communist downfall and emergence of a new Russia.

Offered on a regular basis.

HIST 3421. History of Western Science to the Scientific Revolution. 3 hours.

The history of early science beginning with some major ancient and medieval natural philosophers and historians, and ending with the Scientific Revolution of the 1500s and 1600s, which decisively shaped western civilization.

Offered on a regular basis.

HIST 3432. History of Western Science Since the Scientific Revolution. 3 hours.

A continuation of the survey of the history of science, from the culmination of the Scientific Revolution in the 1600s to the twentieth century, considering science and scientific ideas in relation to broader social, religious, and intellectual issues.

Offered on a regular basis.

HIST 3433. History of Medicine. 3 hours.

The history of medicine in Western society. The impact of epidemic disease, concepts of illness, medical therapies, types of practitioners and their education, and public health.

Offered every year on a regular basis.

HIST 3500. Seventeenth Through Nineteenth-Century Southern Africa. 3 hours.

Social, political, and economic changes in southern African societies (South Africa, Namibia, Lesotho, Botswana, Swaziland, Zimbabwe, and Mozambique) as they assimilated non-African peoples, their ideas, and material culture. Independent, viable and adaptable, Africans engaged Portuguese, British, Boers, and Germans as they competed for land, cattle, and trade.

Offered on a regular basis.

HIST 3511. East Africa to the Nineteenth Century. 3 hours.

Economic, political, and cultural history of East Africa to the nineteenth century. Growth of agricultural systems, forms and functions of states and kingdoms, the world of the Indian Ocean, slavery and rebellion.

Offered on a regular basis.

HIST 3512. East Africa in the Nineteenth and Twentieth Centuries. 3 hours.

Economic and cultural history of East Africa in the nineteenth and twentieth centuries. Food, trade, commodification, slavery, rage, missionary and colonial interests, nationalisms, independence, art and literature.

Offered on a regular basis.

HIST 3530. Women in Sub-Saharan Africa. 3 hours.

Women's social, economic, spiritual, and political contributions to African history from precolonial to contemporary times. Emphasizing African women, it also addresses European and Asian women immigration. Women's interpretations of their identities, social worlds, and experiences, recognizing their essential role in African societies.

Offered on a regular basis.

HIST 3562. The Middle East From 1453 to 1918. 3 hours.

The history of the Middle East from 1453 to 1918, focusing on the Ottoman Empire and its provinces.

Offered every year on a regular basis.

HIST 3570H. Religion, Nationalism, and Revolution in the Middle East, 1900 to the Present (Honors). 3 hours.

Not open to students with credit in HIST 3560.

Prerequisite: Permission of Honors.

Evolution of religious, nationalist, and cultural identities in the region of the Modern Middle East and their contribution to political revolutions throughout the twentieth century.

Offered on a regular basis.

HIST 3580. Egypt: Mother of Civilization. 3 hours.

Political and cultural history of Egypt from the medieval era up to the present. Examining the history of education in Egypt, Egyptian women, the growth of feminism, and Cairo as an international metropolis, with a look at Egypt's experiences with colonialism and relationship with the rest of Africa, particularly Sudan.

Offered on a regular basis.

HIST 3601. Premodern Japan: Foundations of Culture and State. 3 hours.

Ancient and medieval Japan, focusing on the institutional and cultural foundations of the Japanese state.

Offered fall semester.

History

HIST 3602. Modern Japan: From Shogun to Superpower. 3 hours.

Early modern and modern Japan: the transformation of Japan from an isolationist, agrarian country to a military giant, to a broken and defeated nation, to an economic superpower.

Offered spring semester.

HIST 3661. History of China I: Traditional China. 3 hours.

Traditional, intellectual, political, economic, social, literary, religious, and diplomatic developments up to Sung dynasty. Influences of Confucianism, Daoism, and Buddhism on identity; development and influence of "Zhung-Guo" (Central Kingdom); trade-tribute concepts on political and economic institutions; the importance of growth of family system/gender views on social institutions.

Offered on a regular basis.

HIST 3662. History of China II: Transitional China. 3 hours.

Internal/external influences that challenge traditions and cause important changes. Influences of nomadic invaders—Mongols/Manchus, on social and political history, of Buddhist/Daoist influences on Neo-Confucianism; of impact of Christian missionaries/western merchants on modifications of political and economic institutions.

Offered on a regular basis.

HIST 3663. History of China III: Revolutionary China. 3 hours.

End of nineteenth through the twentieth century; focusing on the Republic of China, its establishment, development, and troubles; rise of Nationalism/Communism; establishment, development, and troubles of the People's Republic of China. Revolutions; the leaders of them, and their important ideas and impact.

Offered on a regular basis.

HIST 3670H. Introduction to Chinese Civilization (Honors). 3 hours.

Prerequisite: Permission of Honors.

Major sources, ideas, and institutions of Chinese tradition.

Offered on a regular basis.

HIST 3680H. Communist China (Honors). 3 hours.

Prerequisite: Permission of Honors.

The rise of Communism in China. The collapse of the "old order," Marxism and Maoism, the Chinese Civil War, the establishment of the PRC, the Great Leap Forward, the Great Proletarian Revolution, the Deng Xiaoping era, among other topics.

Offered on a regular basis.

HIST 3720H. Seminar in Comparative History (Honors). 3 hours.

Prerequisite: Permission of Honors.

An undergraduate research seminar focusing on topics from a comparative perspective.

Offered every odd-numbered year on a regular basis.

HIST 3751. War and Society to 1600. 3 hours.

The history of warfare in the ancient and medieval worlds. Focuses on the interdependent, causal relationship between the structures and sources of political power, the objectives and purposes of warfare, the composition and organization of military forces, and the tactics and equipment of war.

Offered on a regular basis.

HIST 3752. War and Society Since 1500. 3 hours.

The history of warfare in the context of the warring societies from 1500 to the present in world history.

Offered every year on a regular basis.

HIST 4000/6000. Studies in American History. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Junior or senior standing.

A special subject not otherwise offered in the history curriculum. Topics, methodology, and instructors vary from semester to semester. Normally, no more than two such courses may be counted toward the major or the minor in history, exceptions being made only by the Coordinator of Instruction.

Offered on a regular basis.

HIST 4030/6030. Politics of Morality in the United States. 3 hours.

Origin of selected political and moral dilemmas in American multicultural contexts from the Colonial to the Contemporary period.

Offered every year on a regular basis.

HIST 4040/6040. Working Class America. 3 hours.

Using fiction and film as well as traditional texts, the history of working-class women and men in the United States. The emphasis will be on the everyday lives of the laborers—what they did at work and at home, in the union hall, and on the picket line.

Offered on a regular basis.

HIST 4050/6050. American Lives. 3 hours. Repeatable for maximum 6 hours credit.

Biographies and autobiographies to explore a variety of themes and issues in American history. Emphases will differ depending on instructor: focus may be nineteenth century, twentieth century, women, race, southern autobiography, etc.

Offered on a regular basis.

HIST 4060/6060. American Legal History. 3 hours.

American legal thought, institutions, and education focusing on the impact of social, political, and economic forces on the legal system. The English background colonial period, legal foundations of the new nation and the nineteenth and twentieth centuries.

Offered every odd-numbered year on a regular basis.

HIST 4071/6071. Antebellum South. 3 hours.

A chronological and thematic history of the South from Spanish exploration and Jamestown's settlement through the secession crisis of 1860-1861, with an emphasis on the social, cultural, economic, and political aspects of southern life in the colonial and antebellum periods.

Offered every year on a regular basis.

HIST 4072/6072. The Civil War Period of American History. 3 hours.

The origin, conduct, and legacy of the war and the impact of the conflict upon peoples and institutions.

Offered on a regular basis.

HIST 4073/6073. The Era of Reconstruction, 1865-1877. 3 hours.

The process of reunification, especially in the American South, with emphasis upon the experience of African Americans.

Offered on a regular basis.

HIST 4074/6074. The South Since Reconstruction. 3 hours.

Economic, social, cultural, and political developments in the South since Reconstruction.

Offered on a regular basis.

HIST 4075/6075. Scientific Interests in the South. 3 hours.

Scientific inquiry in the southeastern region of the United States. Stresses cultural and intellectual milieu, examines special role of natural history, and compares inquiries of southern scientists with those of other contemporary United States scientists.

Offered every odd-numbered year on a regular basis.

HIST 4080/6080. Politics of Gender in United States History. 3 hours.

Representations of women's power historically, evaluated critically in terms of gender, race, and class.

Offered every year on a regular basis.

HIST 4091/6091. Problems in American Foreign Policy, 1776-Present. 3 hours.

Selected problems related to United States foreign policy.

Offered on a regular basis.

HIST 4092/6092. The United States in the Era of the Cold War. 3 hours.

The political, diplomatic, military, and social history of the United States during the era of the Cold War (1946-1992).

Offered on a regular basis.

HIST 4100/6100. History of Georgia. 3 hours.

Using historical scholarship, biography, and film, the Georgia past from pre-history to the present. Themes of race, class, and modernization in the development of Georgia; special emphasis on the lives of everyday Georgians at various points in history.

Offered on a regular basis.

(HIST)ESOC 4150/6150. Teaching United States History. 3 hours.

Classic historiography and current debates among historians over major themes and events in United States history. Examination of ways in which this historical scholarship can be incorporated into social studies teaching. Evaluation of materials and methods used to teach United States history in secondary and middle schools.

Offered on a regular basis.

HIST 4200/6200. Studies in Latin American History. 3 hours. Repeatable for maximum 9 hours credit.

Special issues or topics in Latin American history not covered in a regular history course. Topics, methodology, and instructor vary from semester to semester. Representative topics include the Latin American revolutionary tradition, the wars of independence in the Americas, and Latin American wars.

Offered on a regular basis.

HIST 4210/6210. Latin America: A Socioeconomic History Since 1930. 3 hours.

Latin American social and economic development from the onset of the Depression until the present. The role of the state in economic development; the impact of modernization on traditional social systems; persistence of social inequity amidst development; and the liberal and revolutionary responses to social needs.

Offered on a regular basis.

HIST 4220/6220. The United States and Latin America. 3 hours.

The political, economic, and cultural relations between the United States and Latin America from 1776 to the present. Spanish-American revolutions, the Monroe doctrine, United States expansionism, the Pan American system, United States intervention, the Good Neighbor policy, Latin America in the Cold War, and United States and Latin American revolutions.

Offered on a regular basis.

HIST 4300/6300. Studies in European History. 3 hours.

Topical studies that vary by year and instructor. Topics might include "Art and Society in the Age of the Reformation," "War and Gender in Twentieth-Century Europe," "Society and Culture in the Medieval European City," and "Imperialism and Anti-imperialism in Modern Europe." Course may be taken through UGA Studies Abroad program in Oxford.

Offered on a regular basis.

HIST 4311/6311. Greek History. 3 hours.

Greek history to the time of Alexander the Great.

Offered on a regular basis.

HIST 4312/6312. The Hellenistic World. 3 hours.

Problems in Hellenistic history from 330 B.C. to the Roman conquest with emphasis on the Antigonid, Seleucid, and Ptolemaic dynasties.

Offered on a regular basis.

History

HIST 4321/6321. The Roman Republic. 3 hours.

Roman history to the end of the republic.

Offered on a regular basis.

HIST 4322/6322. The Roman Empire. 3 hours.

History of the Roman Empire from 27 B.C. to A.D. 337 with special emphasis on the government of Augustus, reasons for its decline, and the final attempt at unification of the empire under Constantine.

Offered on a regular basis.

HIST 4330/6330. Institutions of the Medieval West. 3 hours.

A variety of specific topics in medieval history, such as law and justice, Anglo-Saxon England, politics of the family, and attitudes toward gender and sexuality.

Offered on a regular basis.

HIST 4340/6340. Rebirth and Reinvention in Early Modern Europe. 3 hours.

European society in the context of pivotal social, political, and intellectual moments, from the growth of the Humanist movement to the military revolution. The goal is a better understanding of "turning points" in history, and their creation and definition.

Offered on a regular basis.

HIST 4350/6350. Material Culture and Consumer Society in Early Modern Europe. 3 hours.

Examines the origins of modern consumerism by looking at production and consumption in pre-industrial Europe. Treats the circulation, possession, and meaning of goods such as clothes, food, books, and objects of art. Themes include consumption as a sign of social status, popular and learned attitudes toward markets, and luxury.

Offered on a regular basis.

HIST 4360/6360. European Popular Culture. 3 hours.

The symbols, expressions, and entertainments that all Europeans drew upon from the wealthiest and best educated to the poorest and illiterate. Themes may include material culture, gender identities, folktales, reading practices, religion and worship, music and theatre. Taught as a seminar with extensive readings in primary and secondary sources.

Offered on a regular basis.

HIST 4371/6371. The Medieval Mind. 3 hours.

The intellectual history of medieval Europe. The nature of Christian behavior will be examined in the development of premodern ideas on the human body, politics, law, and religion.

Offered on a regular basis.

HIST 4372/6372. Intellectual History in Early Modern Europe. 3 hours.

The intellectual heritage of early modern Europe. Students will study the works of humanists, theologians, and philosophers, as well as evaluate the social context in which those works were produced.

Offered on a regular basis.

HIST 4373/6373. Nineteenth-Century European Intellectual History. 3 hours.

European thought from 1815-1914, with emphasis on the relationship between ideas and their political and social context.

Offered on a regular basis.

HIST 4374/6374. Intellectual History of Twentieth-Century Europe. 3 hours.

Major trends and innovations in European intellectual life, from the fin-de-siècle revolt against positivism to post-structuralism and its critics. Coverage will include such thinkers as Freud, Weber, and Foucault, as well as such wider cultural movements as futurism, surrealism, and existentialism.

Offered on a regular basis.

HIST 4375. The Golden Age of European Natural History. 3 hours.

Prerequisite: BIOL 1104-1104L or BIOL 1108-1108L or BTNY 1220-1220L.

The discoveries, controversies, and speculation in eighteenth and nineteenth-century zoology, botany, and paleontology that profoundly shaped western thought about humans and nature.

Offered on a regular basis.

HIST 4381/6381. Politics, Culture, and Society in Stuart England. 3 hours.

Religious, political, and cultural upheavals under the Stuart monarchs, 1603-1704.

Not offered on a regular basis.

HIST 4382/6382. Britain from the Age of Revolution to the Age of Victoria 1780-1900. 3 hours.

Britain in the age of the American War of Independence, the French Revolution, and the Industrial Revolution. Special attention will be paid to political culture, intellectual change, and economic development. Course may be taken through UGA Studies Abroad program in Oxford.

Offered on a regular basis.

HIST 4383/6383. Britain 1901 to the Present. 3 hours.

Political culture, intellectual change, and economic/imperial readjustment in twentieth-century Britain and beyond. Course may be taken through UGA Studies Abroad program in Oxford.

Offered on a regular basis.

HIST 4391/6391. The French Revolution and the First Empire. 3 hours.

The causes and course of Europe's first modern revolution and its reconfiguration by Napoleon Bonaparte. Students will read primary sources and a rich contemporary historiography which illuminate official and popular efforts to reshape government, society, and culture. Taught as a seminar with extensive readings.

Offered on a regular basis.

HIST 4392/6392. Twentieth-Century France. 3 hours.
The history of France in the twentieth century, with an emphasis on politics and social change.
Offered on a regular basis.

HIST 4400/6400. The Age of World Wars I and II. 3 hours.
The origins, course, nature, and consequences of World Wars I and II in Europe, 1870-1950.
Offered on a regular basis.

HIST 4410/6410. Nazism and Fascism in Europe, 1919-1945. 3 hours.
The two totalitarian movements, Italian Fascism and German National Socialism (Nazism), emphasizing the intellectual origins of antidemocratic impulses before and after 1919, the unique social and political factors present in each nation, the personalities of Hitler and Mussolini, and the growth of the totalitarian one-party state.
Offered every year on a regular basis.

HIST 4420/6420. Holocausts in History. 3 hours.
The Jewish Holocaust 1933-1945, emphasizing historical precedents and consequences. Traditional religious anti-Semitism, biologically-based racism, and extreme nationalism will be investigated as sources of modern genocidal behavior.
Offered every year on a regular basis.

(HIST) ANTH 4470. The Rise and Fall of the Southeastern Chiefdoms. 3 hours.
Prerequisite: ANTH 1102 or permission of department.
Development of the native societies of the southeastern United States, the exploration of the area by Spain in the sixteenth century, and the consequences of the meeting of the two peoples.
Not offered on a regular basis.

HIST 4500/6500. Studies in African or Middle Eastern History. 3 hours.
Topics in modern and ancient Middle Eastern or African history. Non-traditional methodologies and sources are combined to introduce students to emerging issues in African or Middle Eastern history.
Offered on a regular basis.

HIST 4510/6510. History of Famine and Food Systems in Africa. 3 hours.
African agricultural achievement, theories of production and famine systems, and attempts by colonial and international capital to control African food systems. Literature is a major source.
Offered on a regular basis.

HIST 4530/6530. The History of Orientalism. 3 hours.
Images and symbolism used by Europeans and Americans to define the Islamic Middle East. The history of the Middle East through representation—stereotypes, myths, fairy tales, novels, films, and news coverage—

particularly the ramifications of these images on Western foreign policy towards the Islamic Middle East.
Offered on a regular basis.

HIST 4540/6540. Conflict in Twentieth-Century Southern Africa. 3 hours.
South Africa's economic, political and military might has shaped other southern African societies (Namibia, Lesotho, Botswana, Swaziland, Zimbabwe, and Mozambique) in the twentieth century. Reform and revolution which Africans and Europeans employed to regain and maintain African independence in the region.
Offered on a regular basis.

HIST 4550/6550. Christianity and Colonialism in Africa. 3 hours.
Christianity was both ally and adversary to colonialism, threatening African "tradition" and aiding a vocal westernized elite which shaped independent African nations. African initiatives in Christian conversion, colonial Christianity, Africans in mission communities, mission education and westernized elites, independent African religious movements, and Christianity and African nationalism.
Offered on a regular basis.

HIST 4600/6600. Studies in Asian History. 3 hours.
Repeatable for maximum 9 hours credit.
A special issue or topic not otherwise offered in the history curriculum. Topics, methodology, and instructors will vary from semester to semester. Representative topics include "Japan and the Samurai," "Women, Gender and Family in Traditional Japan," and "Court and Countryside in Japan's Golden Age."
Offered on a regular basis.

HIST 4700/6700. Themes in Comparative History. 3 hours.
A special subject not otherwise offered in the history curriculum. Topics, methodology, and instructors vary from semester to semester.
Offered fall and spring semesters.

HIST 4750/6750. History and Film. 3 hours.
We are living in a post-literate age. Most people now get their history from films instead of books. How film, using a different vocabulary than that of books, recreates the past.
Offered on a regular basis.

HIST(PHIL) 4860/6860. History, History of Philosophy, Philosophy. 3 hours.
Historians and philosophers differ in the source of evidence and arguments they use and in the standards to which they appeal. Nonetheless, works in each of these fields raise questions relevant to the other field. The purpose of this course is to explore the main relationships between these two fields.
Offered on a regular basis.

History / Horticulture

(HIST)EDHI 4900/6900. History of American Colleges and Universities. 3 hours.

Prerequisite: HIST 2111 and HIST 2112.

History of American colleges and universities from 1619 to the present. Student life, European antecedents, the nature of the university, the impact of religion, the rise of athletics, the culture of collegiate life, and the influence of society.

Offered on a regular basis.

HIST 4960H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

HIST 4960/6960. Directed Readings in History. 3 hours. Repeatable for maximum 6 hours credit.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered every year on a regular basis.

HIST 4970H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

HIST 4980H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

HIST 4990. Senior Seminar in History. 3 hours.

The methods of historical research and writing as well as a brief study of the philosophy of history and historiography. The student must write a satisfactory formal paper.

Offered fall and spring semesters.

HIST 4990H. Honors Thesis. 3 hours.

Not open to students with credit in HIST 4990.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Thesis course.

Offered fall and spring semesters.

(HORT) Horticulture

College of Agricultural and Environmental Sciences, Department of Horticulture

HORT 2000. Horticultural Science. 3 hours.

Horticultural science, the biology of horticulture, the technology of crop production and marketing, production systems, aesthetics, and crop types.

Offered fall and spring semesters.

HORT 3010. Introduction to Vegetable Crops. 3 hours.

Prerequisite: BIOL 1103-1103L or BTNY 1210-1210L.

Botany, general culture, and use of major vegetable crops.

Offered fall semester.

HORT 3020. Introduction to Fruit Crops. 2 hours.

Prerequisite: (BIOL 1103-1103L and BIOL 1104-1104L) or (BIOL 1107-1107L and BIOL 1108-1108L) or (BTNY 1210-1210L and BTNY 1220-1220L).

Botanical description, geographic distribution, general culture, and culinary uses of the world's major fruit crops.

Offered spring semester.

HORT 3140. Interior Plantscapes. 2 hours.

Growth, installation, care, and use of indoor plants.

Offered spring semester.

HORT(BTNY)(ANTH) 3440. Herbs, Spices, and Medicinal Plants. 2 hours.

Historical and contemporary significance of herbs, spices, and medicinal plants in human culture and commerce; chemical and biological characteristics; commercial production techniques; application in modern and traditional medical systems.

Offered fall semester.

HORT(LAND) 3450. Plants in the Cultural Environment. 2 hours.

Use and selection of plants for environmental design.

Offered spring semester.

HORT(LAND) 3450L. Plant Selection Laboratory.

2 hours. Two 2-hour lab periods.

Corequisite: HORT(LAND) 3450.

Use and selection of plants for environmental designs.

Offered spring semester.

HORT 3500-3500L. Herbaceous Perennials I. 1 hour.

Two lectures and one 2-hour lab period.

Identification and environmental needs of herbaceous perennials.

Non-Traditional Format: Class taught for first half of fall semester.

Offered fall semester.

Horticulture

HORT 3510-3510L. Herbaceous Perennials II. 1 hour. Two lectures and one 2-hour lab period. Identification and environmental needs of herbaceous ornamental perennials. Non-Traditional Format: Course will be taught during last seven weeks of spring semester. Offered spring semester.

HORT 3620-3620L. Plant Propagation. 3 hours. Two lectures and one 2-hour lab period. Prerequisite: BIOL 1103-1103L or BTNY 1210-1210L. Principles and practices for increasing plant numbers with emphasis on the anatomical and physiological basis for various methods. Offered fall semester.

HORT 3630-3630L. Nursery Management. 5 hours. Four lectures and one 2-hour lab period. Prerequisite: BIOL 1103-1103L or BTNY 1210-1210L. Locating, operating, and managing retail and wholesale nurseries. Offered spring semester.

HORT 3700. Systematics of Woody Landscape Plants I. 3 hours. Two lectures and one 2-hour lab period. Identification, ornamental characteristics, culture, propagation, and landscape uses of woody ornamental plants. Emphasis on shade trees and needled evergreens. Offered fall semester.

HORT 3710. Systematics of Woody Landscape Plants II. 3 hours. Two lectures and one 2-hour lab period. Identification, ornamental characteristics, culture, propagation, and landscape uses of woody ornamental plants. Emphasis on broadleaf evergreens, vines, small flowering trees and shrubs. Offered spring semester.

HORT 3910. Horticulture Internship. 3 hours. Practical work experience in the operations and management of horticultural enterprises. Non-Traditional Format: At least twenty hours of work per week for ten weeks. Offered fall, spring, and summer semesters.

HORT 4000. Horticultural Professionalism. 1 hour. Professional behavior, resume writing, interviewing, and student oral presentations on horticultural topics. Offered fall semester.

HORT 4010/6010-4010L/6010L. Olericulture. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: HORT 3010. Current cultural practice of and environmental influence on vegetable crop production. Offered spring semester of even-numbered years.

HORT 4020/6020-4020L/6020L. Pomology. 3 hours. Three lectures and one 2-hour lab period. Prerequisite: HORT 3020 or permission of department.

Culture and management of orchard crops, including site selection, cultivar and rootstock selection, pruning and training, propagation, integrated pest management, physiology of flowering and fruiting, harvest and postharvest procedures. Laboratory provides hands-on experience pruning, training, and budding trees, and using/calibrating equipment needed for managing orchards. Offered spring semester of odd-numbered years.

HORT 4050/6050. Greenhouse Management. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: BIOL 1103-1103L or BTNY 1210-1210L. Commercial greenhouse crop production practice with emphasis on plant nutrition, growth regulators, pest control, and postharvest handling. Offered spring semester.

HORT 4070/6070. Special Problems in Horticulture I. 1-5 hours. Research on special problem under direction of faculty. Non-Traditional Format: As arranged under the direction of faculty. Offered fall, spring, and summer semesters.

HORT 4080/6080. Special Problems in Horticulture II. 1-5 hours. Advanced research on problem of special interest under direction of faculty. Non-Traditional Format: As arranged under the direction of faculty. Offered fall, spring, and summer semesters.

HORT 4090. Landscape Management. 4 hours. Three lectures and one 2-hour lab period. Landscape installation, maintenance, estimating, and contracts. Offered fall semester.

HORT 4110/6110. Plant Nutrition. 3 hours. Prerequisite: CRSS 3050-3050L. Mineral nutrition of higher green plants. Offered fall semester.

HORT 4210/6210. Postharvest Physiology of Horticultural and Agronomic Crops. 4 hours. Three lectures and one 2-hour lab period. Prerequisite: BIOL 1107-1107L or BTNY 1210-1210L or (CHEM 1212 and CHEM 1212L). Catabolic and anabolic metabolism, and anatomical and pathological responses of harvested fruits, vegetables, nuts, seeds, cut flowers, and intact plants. Transportation, refrigeration, controlled atmospheric storage, drying, and packaging of harvested products. Offered spring semester.

HORT 4440/6440-4440L/6440L. Environmental Physiology in Horticulture. 4 hours. Three lectures and one 2-hour lab period. Not open to students with credit in BTNY 4850/6850-4850L/6850L, BTNY 8890-8890L, or CRSS 3300.

Horticulture / Health Promotion and Behavior

Prerequisite: (BIOL 1103-1103L and BIOL 1104-1104L) or (BIOL 1107-1107L and BIOL 1108-1108L) or (BTNY 1210-1210L and BTNY 1220-1220L).

Effects of environmental factors on growth and physiology of horticultural plants and modification of the plant's environment to improve crop production. Offered fall semester.

HORT 4890/6890. Biodiversity and the World's Food Crops. 3 hours.

Molecular, organismal, ecological, and sociocultural aspects of biodiversity. Independent research project required.

Offered spring semester.

HORT 4990-4990D. Environmental Issues in Horticulture. 1 hour. 0-1 lectures and 0-1 lab periods of 1 hour per week.

Prerequisite: Senior standing.

Environmental issues of concern to the horticulture industry. Discussion topics include water quality, water conservation practices, pesticides and pest management practices, solid waste disposal and usage, the role of agriculture in global climate change.

Non-Traditional Format: One lecture or discussion per week.

Offered spring semester.

(HPRB) Health Promotion and Behavior

College of Education, Department of Health Promotion and Behavior

HPRB 1190. Fundamentals of First Aid and Emergency Response. 2 hours.

Fundamentals of first aid, cardiopulmonary resuscitation (CPR), and general emergency response.

Offered on a regular basis.

HPRB 1710. Health and Wellness. 3 hours.

Factors affecting the level of wellness of the individual are considered. Topics include mental health, nutrition, diet and weight control, physical fitness, smoking, human sexuality, consumer health, alcohol and other drugs, disease, environmental health, and injury prevention.

Offered on a regular basis.

HPRB 1850. Contemporary Issues in Health. 2 hours.

Contemporary health problems facing individuals and society. Readings, classroom discussions, and activities challenge students' perspectives on health-related attitudes and practices within political, ethical, and economic contexts.

Offered on a regular basis.

HPRB 2420. Health Education in Early Childhood Education. 2 hours.

Health education content, methods, and resources for

early childhood teachers. Emphasis is on comprehensive school health education programs.

Offered on a regular basis.

HPRB 3020. Introduction to Health Promotion and Education. 3 hours.

The philosophy and principles underlying the field of health promotion and education. Includes literature research, organizations, scientific foundations, and employment potential.

Offered on a regular basis.

HPRB 3150. Issues in Women's Health. 3 hours.

Contemporary issues that affect the health of women including health status perspectives, preventive measures, health care alternatives, and special health concerns.

Offered on a regular basis.

HPRB 3190. Advanced First Aid. 3 hours.

Problems and training in the aspects of comprehensive emergency medical care required at the scene of an injury or sudden illness.

Offered on a regular basis.

HPRB 3210. Issues in Health Consumerism and Self Care. 3 hours.

Health products and services and the factors that influence personal choices in the health marketplace. Includes a discussion of the philosophy, theory, and practice of self-care and health activism.

Offered on a regular basis.

HPRB 3400. Basic Curriculum and Teaching Procedures in School Health Education. 4 hours.

Prerequisite: HPRB 1710.

Curriculum development within the preschool through 12th grade comprehensive school health education program; review of scope and sequence, content, resources, and materials; development of lesson plans including concepts and objectives; examination and application of various teaching methods; utilization of media, community resources, and assessment techniques.

Offered on a regular basis.

HPRB 3450. Practicum in Health Education. 1-2 hours. Repeatable for maximum 2 hours credit.

Individual practical experience in health education within the school setting.

Non-Traditional Format: Observation and practical experience in the health education classroom. Most of the time is spent observing; however, the student may teach all or part of a class. Students also observe classroom and school management strategies. A written report of the experience is required.

Offered on a regular basis.

HPRB 3460. Practicum in Health Promotion. 1-2 hours. Repeatable for maximum 2 hours credit.

Individual practical experience in health promotion and

education in a community or worksite setting.
Non-Traditional Format: Observation and practical experience in a setting in the community such as a health department, hospital wellness center, or a corporate health promotion program. A written report of the experience is required.
 Offered on a regular basis.

HPRB 3700. Community Health. 4 hours.
 Community health programs, including organizational structure of federal, state, and local health-related agencies. Also analysis of the interrelationship of political, social, and economic dimensions of community health including epidemiology.
 Offered on a regular basis.

HPRB 3750. Foundations of Injury Prevention. 3 hours.
 The significance of injury as a health problem and the nature of injury prevention programs.
 Offered on a regular basis.

HPRB 4000/6000. Special Problems in Health Promotion and Behavior. 1-6 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Permission of department.
Independent study of selected topics.
Non-Traditional Format: Students develop a proposal for a learning experience that is not normally available to them in a regular department course. The amount of work and/or the depth of inquiry depends on the number of credits the student desires. The proposal must be approved by the faculty member who is directing the project and by either the undergraduate or graduate coordinator.
 Offered on a regular basis.

HPRB 4400. Health Promotion Program Development. 4 hours.
Prerequisite: (HPRB 1710 and HPRB 3020) or permission of department.
 Health promotion program development in community, worksite, and hospital settings. Emphasis given to program content, strategies, overall planning, and implementation. Topics include leadership, conflict resolution, communication, funding, marketing, and related professional issues pertaining to health promotion.
 Offered on a regular basis.

HPRB 4450/6450. Occupational Safety. 3 hours.
 The specific areas and the broad scope in methods, materials, and problems in occupational safety programming with special emphasis on organization and implementation of injury prevention and control techniques.
 Offered on a regular basis.

(HPRB)SPCM 4610/6610. Health Communication. 3 hours.
 Communication about health with physicians and other

providers, within support groups and health care organizations, and by public figures, groups, and organizations.
 Offered fall semester.

HPRB 5060/7060. Educational Strategies in Human Sexuality. 3 hours.
 Theory and practice of sexuality education; basic issues, philosophy, and guiding principles; legal implications; needs, justification, and objectives; curriculum critique for school and community programs; content knowledge, resource materials; acceptable methods to approach controversial topics.
 Offered on a regular basis.

HPRB 5160/7160. Special Topics in Health Promotion and Behavior. 1-3 hours. Repeatable for maximum 6 hours credit.
 Selected health problems or issues, with emphasis on epidemiology, etiology, and the development and evaluation of prevention measures.
Non-Traditional Format: Format will generally be lecture and discussion.
 Not offered on a regular basis.

HPRB 5210/7210. The Effects of Drug Use and Abuse. 3 hours.
 Social, moral, psychological, and physiological causes and effects of drug use and abuse. Individual, family, and community factors related to prevention and treatment.
 Offered on a regular basis.

HPRB 5460. Student Teaching in Health Education. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: HPRB 3400 and permission of department.
 Practical experience in school health education through placement in a public school setting.
Non-Traditional Format: Undergraduate student teaching under the supervision of a certified teacher who has been approved by the department. Students meet with the student teaching coordinator on campus at least twice during the semester. Students develop a final professional portfolio as a result of their teaching experience.
 Offered on a regular basis.

HPRB 5560. Field Experience in Health Promotion. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: HPRB 4400 and permission of department.
 Practical experience in health education/promotion through placement in an appropriate community or worksite setting.
Non-Traditional Format: Community health field experience/internship under the supervision of a health professional who has been approved by the department. Student compiles a work "diary" and a portfolio of professional activities, and submits a final written report about the experience.
 Offered on a regular basis.

(INTB) International Business

Terry College of Business, International Business Programs

INTB 4800. Internship and/or Cooperative Education in International Business. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Internship or studies abroad program in the field of international business.

Non-Traditional Format: This course is designated as an internship and does not meet formally.

Offered on a regular basis.

(INTS) Interdisciplinary Studies

College of Arts and Sciences

INTS 4990. Interdisciplinary Studies. 3 hours.

Prerequisite: Senior standing and permission of department.

Individual research or project in the major area of study.

Required of all Interdisciplinary Studies majors.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

(ITAL) Italian

College of Arts and Sciences, Department of Romance Languages

Certain courses in Italian are not open to native speakers. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was Italian.

ITAL 1001. Elementary Italian. 4 hours.

Not open to students with credit in ITAL 1002.

The Italian language and Italian-speaking cultures. Emphasis is on conversational skills with attention to reading, writing, and listening comprehension. Fundamentals of Italian pronunciation and grammar. Work in the language laboratory. Course may be taken through UGA Studies Abroad program in Cortona, Italy and GLOBIS in Verona, Italy.

Offered fall, spring, and summer semesters.

ITAL 1002. Elementary Italian. 4 hours.

Not open to students with credit in ITAL 2001.

Prerequisite: ITAL 1001.

A continuation of Elementary Italian. Open only to students who took Elementary Italian or who have an appropriate placement score. Emphasis is on conversational skills with attention to reading, writing, and listening comprehension. Fundamentals of Italian pronunciation and grammar; study of Italian culture. Work

in the language laboratory. Course may be taken through UGA Studies Abroad program in Cortona, Italy. Offered fall and spring semesters.

ITAL 2001. Intermediate Italian. 3 hours.

Not open to students with credit in ITAL 2002.

Prerequisite: ITAL 1002.

Practice in speaking, listening, reading, and writing Italian at the intermediate level. Study of Italian language and culture. Course may be taken through UGA Studies Abroad program in Cortona, Italy.

Offered fall and spring semesters.

ITAL 2002. Intermediate Italian. 3 hours.

Not open to students with credit in ITAL 3010.

Prerequisite: ITAL 2001.

A continuation of Intermediate Italian. Emphasis on strengthening the students' speaking, listening, reading, and writing skills at the intermediate level. Conversation, compositions, reading of texts, and grammar review.

Offered fall and spring semesters.

ITAL 2500. Italian Culture. 3 hours.

Italian culture through literature, sociopolitical history, and the arts. Italian history in a specific period as seen through a study of these three areas. Development of an integrated approach to culture, literature, and language. Given in English.

Offered every year on a regular basis.

ITAL 2600. Intensive Italian. 3 hours.

Prerequisite: Permission of department.

Conversational skills, reading, writing, and listening comprehension. Not open to native speakers. Not to be used to satisfy the undergraduate language requirement.

Offered every year on a regular basis.

ITAL 2950. Study Abroad in Italian. 3 hours.

Prerequisite: Permission of department.

Italian language, literature, and culture course taught at study abroad programs of the University System of Georgia and non-University of Georgia programs.

Offered summer semester.

ITAL 2960. Study Abroad in Italian. 3 hours.

Prerequisite: Permission of department.

Italian language, literature, and culture course taught at study abroad programs of the University System of Georgia and non-University of Georgia programs.

Offered summer semester.

ITAL 2970. Study Abroad in Italian. 3 hours.

Prerequisite: Permission of department.

Italian language, literature, and culture course taught at study abroad programs of the University System of Georgia and non-University of Georgia programs.

Offered summer semester.

ITAL 3010. Italian Conversation and Composition. 3 hours.

Not open to students with credit in ITAL 4010.

Prerequisite: ITAL 2002.

The emphasis is divided between oral and written expression. Composition and conversation are integrated into the context of Italian culture. Given in Italian. Not open to native speakers. Course may be taken through UGA Studies Abroad program in Cortona, Italy.

Offered fall semester.

ITAL 4010. Advanced Conversation and Composition. 3 hours.

Prerequisite: ITAL 3010.

The emphasis is divided between conversation and composition in order to promote students' abilities to express themselves accurately in both oral and written Italian. Activities are integrated into the context of Italian culture. Given in Italian. Not open to native speakers.

Offered spring semester.

ITAL 4040/6040. Topics in Italian Cinema, Culture, and Literature. 3 hours.

Specific aspects of Italian cinema, culture, and literature. Topics to be selected according to the needs and interests of the students. Taught in seminar fashion with extensive outside readings of primary and secondary sources. Given in English.

Offered every year on a regular basis.

ITAL 4050. Italian Literature and Culture from its Origins to 1400. 3 hours.

Prerequisite: ITAL 3010.

Selected poetry and prose from the Italian Middle Ages. Works include Dante's *Vita Nuova*, religious works by Umbrian writers, love poetry of the *Scuola Siciliana* and the *Dolce Stil Novo*, and narrative prose by Boccaccio, Marco Polo, et al. Given in Italian.

Offered every year on a regular basis.

ITAL 4060. Italian Literature and Culture from 1400 to 1700. 3 hours.

Prerequisite: ITAL 3010.

Italian Renaissance and Baroque texts, selected from lyric poetry, the epic, the pastoral, the theater, treatises, scientific prose, family writings and letters. Works by Ariosto, Poliziano, Boiardo, Tasso, Lorenzo, Alberti, Machiavelli, Castiglione, Sannazaro, Marino, Michelangelo, Leonardo da Vinci, Galileo, Stampa, Firenzuola, et al. Given in Italian.

Offered every year on a regular basis.

ITAL 4070. Italian Literature and Culture from 1700 to the Present. 3 hours.

Prerequisite: ITAL 3010.

Intensive reading and analysis of the major works of representative Italian writers and study of main literary movements in Italian literature from the eighteenth to

the twentieth century. Given in Italian. Course may be taken through UGA Studies Abroad program in Cortona, Italy.

Offered every year on a regular basis.

ITAL 4120/6120. Topics in Italian Culture, Language, and Literature. 3 hours. Repeatable for maximum 45 hours credit.

Prerequisite: ITAL 4010 or ITAL 4050 or ITAL 4060 or ITAL 4070.

Selected topics in Italian culture, civilization, language, literature, or literary theory. Given in Italian.

Offered every year on a regular basis.

ITAL 4950. Directed Reading and/or Projects. 3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department and junior or senior standing.

Individual study, reading, or projects under the guidance of a faculty member.

Non-Traditional Format: Directed study.

Offered fall and spring semesters.

ITAL 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

ITAL 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

ITAL 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

ITAL 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors and senior standing.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Directed study.

Offered on a regular basis.

(JOUR) Journalism

College of Journalism and Mass Communication, Department of Journalism

JOUR 3310. Introduction to Print Media. 3 hours.

Structure, operation, responsibilities, and influence of printed mass media from historical and descriptive perspectives. Attention is given to newspapers, magazines, books, news services, photojournalism, and new media technology and their relations to other mass media, government, and society.

Offered fall and spring semesters.

JOUR 3410. News Writing and Reporting. 4 hours.

Three lectures and one 2-hour lab period.

Prerequisite: Permission of department.

Techniques of basic news reporting and writing and an introduction to advanced practices, with practical assignments in the media.

Offered fall, spring, and summer semesters.

JOUR 3410H. Introduction to Writing for Print Media (Honors). 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: Permission of Honors.

Techniques and problems in news gathering and writing for the print media, with special emphasis on legal, ethical, and societal responsibilities.

Offered fall semester.

JOUR 3510. Editing and Makeup. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: JOUR 3410 and permission of department. Selection and preparation of written and pictorial material for newspapers and related media.

Offered fall, spring, and summer semesters.

JOUR 3610. Introduction to Photojournalism. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: Permission of department.

Mass media photography, including camera use and digital image production.

Offered fall, spring, and summer semesters.

JOUR 3710. Advanced Photojournalism. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: JOUR 3610 and permission of department. Techniques, methods, and procedures in photojournalism that are used by newspapers, magazines, and other print media.

Media photo assignments, picture editing, digital imaging, and publication techniques are used to create portfolios.

Offered fall semester.

JOUR 5010. Media Internship. 3 hours.

Prerequisite: JOUR 5300 or JOUR 5580/7580 and permission of department.

Supervised experience in print or electronic publishing. Non-Traditional Format: Supervised experience forty hours a week.

Offered fall, spring, and summer semesters.

JOUR 5170. Advanced Studies in Journalism. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: JOUR 3310 and permission of department. Independent study or special projects in journalism for majors in journalism. Written proposal outlining the work to be undertaken must be submitted and receive the instructor's approval before the student will be permitted to register for the course. Students will be responsible for ensuring the funding of their projects. Non-Traditional Format: This course is an independent study and has no lecture/lab hours.

Offered fall, spring, and summer semesters.

JOUR 5300. Public Affairs Reporting. 3 hours.

Prerequisite: JOUR 3310 and JOUR 3510 and permission of department.

Advanced techniques in news reporting and writing, with special emphasis on practical assignments outside of class covering local government and specialized issues in such areas as business, science, the environment, and health.

Offered fall and spring semesters.

JOUR 5350/7350. Advanced Newspaper Editing and Design. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: JOUR 3510 and permission of department. Techniques of advanced newspaper editing and design, with emphasis on the visual aspects of newspaper editing.

Offered spring semester.

JOUR 5360/7360. Advanced Magazine Editing and Design. 4 hours. Three lectures and one 2-hour lab period.

Prerequisite: JOUR 3510 and permission of department. Planning, processing, and production of a magazine.

Offered fall and spring semesters.

JOUR 5370. Documentary Photojournalism. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: JOUR 3710 and permission of department. Documentary photojournalism and multi-picture reporting on in-depth subjects.

Picture editing and management of visual departments are discussed and students are provided with practical experience in all of these areas.

Offered spring semester.

JOUR 5410/7410. Journalism Ethics. 3 hours.

Prerequisite: JOUR 3310 and JOUR 3510.

Issues of journalistic ethics and social responsibility confronting contemporary American print media and students planning journalism careers.

Offered fall semester.

JOUR 5530/7530. Editorial Writing and Issues. 3 hours.

Prerequisite: JOUR 3410 and permission of department. Creation, production, and analysis of editorials and editorial pages. Methods of identifying and researching issues and organizing, writing, and editing editorials

will be stressed along with methods of analyzing editorials and editorial pages.
Offered fall semester.

JOUR 5580/7580. Magazine Article Writing. 3 hours.
Prerequisite: JOUR 3310 and JOUR 3510 and permission of department.

Methods and procedures in writing various types of articles and features for magazines, magazine sections of newspapers, and other periodicals.

Offered fall and spring semesters.

JOUR 5590/7590. Critical Writing and Reviewing. 3 hours.

Prerequisite: JOUR 3510 and permission of department.
Criticizing and reviewing popular culture and fine arts offerings, such as films, television, pop music and theatre, dance and classical music for newspapers, magazines, and broadcast media.

Offered fall semester.

JOUR 5600/7600. Investigative Reporting. 3 hours.

Prerequisite: JOUR 5300 and permission of department.
Techniques, methods, and practices of investigative, interpretive, and in-depth reporting for print media. Projects in public affairs reporting are developed.

Offered spring semester.

JOUR 5620/7620. Magazine Management. 3 hours.

Prerequisite: JOUR 3310.

Finance and planning skills required to manage the business side of a magazine. Attention will be given to the various systems used in the magazine industry to produce a finished product.

Offered spring semester.

JOUR 5640/7640. Newspaper Management. 3 hours.

Prerequisite: JOUR 3310.

Business and editorial management of newspapers, including newsroom, circulation, advertising, and promotion strategies.

Offered fall semester.

JOUR 5660/7660. Journalism in the Secondary School. 3 hours.

News gathering, news writing, media law and ethics, copy editing, typography, photography, design, desktop publishing, broadcast news, and business practices of newspapers, with specific emphasis on advising staffs of high school newspapers and other media and editing public relations publications for schools.

Offered every year on a regular basis.

JOUR 5670/7670. Contemporary American Newspapers. 3 hours.

Prerequisite: JOUR 3310.

The newspaper and its role in America today. Concentration is on content, policy, influence, social responsibility and ethics, economics, marketing strategies, and technology. Leading newspapers in various regions are examined closely.

Offered spring semester.

JOUR 5700/7700. Advanced Magazine Article Writing. 3 hours.

Prerequisite: JOUR 5580/7580 and permission of department.

An advanced professional course utilizing research and writing techniques to produce articles and features for specific magazine audiences.

Offered spring semester.

JOUR 5800/7800. Computer-Assisted Reporting. 3 hours.

Prerequisite: JOUR 5300 and permission of department.
Use of computers in journalism to gather, analyze, and present information. Subjects include spreadsheets, databases, and electronic searches in public and commercial sources.

Offered spring semester.

JOUR 5990. Seminar in Journalism. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: JOUR 3510 and permission of department.
Variable topics seminar to analyze processes and effects of journalism and to acquire specialized knowledge of specific journalism modes of presentation and production.

Non-Traditional Format: Varies with the topic and approach.

Not offered on a regular basis.

(JPNS) Japanese

College of Arts and Sciences, Department of Comparative Literature

JPNS 1001. Elementary Japanese I. 4 hours.

Emphasis on listening, speaking, reading, and writing. Students will learn grammar, Hiragana and Katakana characters, and about 80 Kanji characters. All lessons include Japanese culture notes. Course also includes conversation sessions and character recognition and pronunciation exercise sessions on computers.

Offered fall semester.

JPNS 1002. Elementary Japanese II. 4 hours.

Prerequisite: JPNS 1001.

Equal emphasis on listening, speaking, reading, and writing. Students will learn grammar and 120 Kanji characters. Lessons include Japanese culture notes as well. The course also includes conversation sessions and character recognition and pronunciation exercise sessions on computers.

Offered on a regular basis.

JPNS 1100. Intensive Japanese. 3 hours.

Prerequisite: JPNS 1002.

Japanese language course with focus on reading, writing, speaking, and understanding Japanese for students beyond the beginning level.

Not offered on a regular basis.

JPNS 2001. Intermediate Japanese I. 3 hours.

Prerequisite: JPNS 1002.

Equal emphasis on listening, speaking, reading, and writing. Students will learn grammar and about 140 Kanji characters. All lessons include Japanese culture notes as well. The course also includes character recognition and pronunciation exercise sessions on computers. Offered fall semester.

JPNS 2002. Intermediate Japanese II. 3 hours.

Prerequisite: JPNS 2001.

Equal emphasis on listening, speaking, reading, and writing. Students will learn grammar and about 160 Kanji characters. All lessons include Japanese culture notes as well. The course also includes character recognition and pronunciation exercise sessions on computers. Offered spring semester.

JPNS 3010. Advanced Japanese I. 3 hours.

Prerequisite: JPNS 2002 or permission of department.

Equal emphasis on listening, speaking, reading, and writing. Students will learn grammar and about 220 Kanji characters. All lessons include Japanese culture notes as well. The course also includes character recognition and pronunciation exercise sessions on computers. Offered fall semester.

JPNS 3020. Advanced Japanese II. 3 hours.

Prerequisite: JPNS 3010 or permission of department.

Equal emphasis on listening, speaking, reading, and writing. Students will learn grammar and about 270 Kanji characters. All lessons include Japanese culture notes as well. Offered spring semester.

JPNS 3990. Directed Study in Japanese Language and Literature. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent study and research under the direction of individual faculty members.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

JPNS 4110. Advanced Japanese III. 3 hours.

Prerequisite: JPNS 3020 or permission of department.

A continuation of Advanced Japanese II, with emphasis on improved proficiency in the four language skills of reading, writing, speaking, and listening, and concentration on the reading of literary texts in Japanese. Offered fall semester.

JPNS 4120. Advanced Japanese IV. 3 hours.

Prerequisite: JPNS 4110 or permission of department.

A continuation of Advanced Japanese III, including the introduction of basic concepts of translating and interpreting from English into Japanese and from Japanese into English and the reading of literary texts in Japanese. Offered spring semester.

JPNS 4500/6500. Readings in Japanese Literature 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: JPNS 3020.

Selected readings of Japanese literature in the original language. Texts will vary, with focus on readings of works of literature and discussion of issues in literary criticism in Japanese.

Not offered on a regular basis.

(JRLC) Journalism Core

College of Journalism and Mass Communication, Department of Journalism

JRLC 5040/7040. Law of Mass Communication. 3 hours.

Prerequisite: ADPR 3100 or ADPR 3850 or JOUR 3410 or TELE 3010 and permission of school.

First Amendment principles and communication law affecting print, telecommunications, advertising, and public relations.

Offered fall, spring, and summer semesters.

JRLC 5080. International Mass Communication. 3 hours.

Mass media of the world—what they are like, how they operate, and what impact they have. Philosophies of different systems will be compared, as well as efforts at development or regulation of these systems. Attention will be given to print and electronic media and to international news agencies.

Offered fall semester.

JRLC 5210. Social Effects of Mass Communication. 3 hours.

Patterns of influence among mass communication and the individuals, organizations, and institutions in society. Current research and critical literature are analyzed in reviewing debates about claims of media effects, including socialization of children, formation of attitudes and values, promotion of social behaviors, and legitimization of power structures.

Offered spring semester.

JRLC 5400. Race, Gender, and the Media. 3 hours.

Prerequisite: Junior standing.

Relationship between men, women, and racial and ethnic minorities in the United States and the media. Includes discussions of representations in mass media (television, print media, advertising, and film); impact of representations on audiences; inequities in media professions and institutions; and alternative, feminist, and minority media.

Offered on a regular basis.

JRLC 5490/7490. History of the Mass Media in the United States. 3 hours.

Mass media in the United States from the colonial period to the present. Special attention is given to newspapers, magazines, radio, and television and their relationship to the history and development of the nation.

Offered on a regular basis.

(KREN) Korean

College of Arts and Sciences, Department of Comparative Literature

KREN 1001. Elementary Korean I. 4 hours.

Pronunciation, grammar, particles, basic sentence construction and sentence patterns. Reading and writing in Hangul, the national writing system.

Offered fall semester.

KREN 1002. Elementary Korean II. 4 hours.

Prerequisite: KREN 1001.

A continuation of Elementary Korean I.

Offered spring semester.

KREN 2001. Intermediate Korean I. 3 hours.

Prerequisite: KREN 1002.

Pronunciation, grammar, particles, sentence construction, and sentence patterns. Declarative, interrogative, propositive, and imperative speech styles. Reading and writing in Hangul, the national writing system.

Offered fall semester.

KREN 2002. Intermediate Korean II. 3 hours.

Prerequisite: KREN 2001.

A continuation of Intermediate Korean I.

Offered spring semester.

(LAND) Landscape Architecture

School of Environmental Design

LAND 1600. Reading the Landscape. 2 hours. One lecture and one 2-hour lab period.

Approaches to perceiving and interpreting the landscape. Topics include the landscape in art and literature, visual assessment techniques, use of maps, field sketching, and photography.

Offered spring semester.

LAND 2010. Landscape Architecture Design Studio I. 4 hours. Two 4-hour lab periods.

Prerequisite: EDES 1500 and LAND 1600.

Corequisite: EDES 2210.

The elements, principles, and processes of visual design as a foundation for environmental design. Emphasis is on the development of creativity and skills through the application of theory and techniques in a series of two and three dimensional design projects.

Offered fall semester.

LAND 2020. Landscape Architecture Design Studio II. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 2010.

Corequisite: EDES 2220.

A continuation of Landscape Architecture Design Studio I. The integration of the range of design determinants in landscape architecture. Further exploration of the design process.

Offered spring semester.

LAND 2310. Landscape Ecology Processes and Materials. 3 hours.

The range of natural processes and materials relevant to landscape architecture (e.g., climate, geomorphology, geology, hydrology, soils, and vegetation communities.) The relationship between these materials and natural processes. Exercises will include some conceptual manipulation of these materials.

Offered fall semester.

LAND 2320. Landscape Construction Processes and Materials. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: EDES 2210.

The range of materials used in the built environment by landscape architects: metals, concrete masonry, glass, plastics, wood. Emphasis on understanding the properties of these materials and the implications for design.

Offered spring semester.

LAND 3030. Landscape Architecture Design Studio III. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 2020.

Corequisite: LAND 3530 and EDES 3230.

Planning and resource analysis. Projects will focus on examining the application principles of sustainable design principles at a variety of scales.

Offered fall semester.

LAND 3040. Landscape Architecture Design Studio IV. 4 hours. Two 4-hour lab periods.

Prerequisite: LAND 3030.

Corequisite: LAND 3540.

The design of housing and mixed-use projects which focus on the issues of community and privacy at a variety of scales from single family dwellings to new towns.

Offered spring semester.

LAND 3330. Landscape Engineering Processes and Materials. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: LAND 2020 and EDES 2210.

The forming and building of landscapes with emphasis on the values of "sustainability." Includes introduction to landscape engineering: grading, drainage, and roadway alignment.

Offered fall semester.

LAND 3340. Applied Landscape Engineering. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: LAND 3330.

Applied grading, drainage, and road alignment.

Offered spring semester.

LAND 3410. Plants of the South. 3 hours. One lecture and two 2-hour lab periods.

Plant materials of the southern United States with an emphasis upon the ornamental attributes, cultural requirements and tolerances, historical origins, and ecological characteristics of plants used in landscape archi-

Landscape Architecture

ture. The course will cover both native and introduced species.

Offered fall semester.

LAND 3420. Plants of Georgia. 2 hours. One lecture and one 2-hour lab period.

A continuation of Plants of the South. Native and introduced species; including trees, shrubs, grasses, herbaceous annual and perennial plants, and commonly used indoor plants.

Offered spring semester.

(LAND)HORT 3450. Plants in the Cultural Environment. 2 hours.

Use and selection of plants for environmental design.

Offered spring semester.

(LAND)HORT 3450L. Plant Selection Laboratory.

2 hours. Two 2-hour lab periods.

Corequisite: HORT(LAND) 3450.

Use and selection of plants for environmental designs.

Offered spring semester.

LAND 3530. Planning and Design. 2 hours.

Prerequisite: EDES 2520.

Corequisite: LAND 3030.

Approaches to planning and design in landscape architecture. The relationship between applied theories and methods and the environmental, social, and cultural context of projects.

Offered fall semester.

LAND 3540. Dwelling and Community. 2 hours.

Prerequisite: LAND 3530.

Corequisite: LAND 3040.

Concepts and theories of residential and neighborhood form.

Offered spring semester.

LAND 4050. Landscape Architecture Design Studio V. 4 hours. Eight studio hours per week.

Prerequisite: LAND 3040.

Corequisite: LAND 4550.

Projects of regional significance, with special emphasis on the role of ecology and the sense of the region. May include recreational facilities and regional park systems. Projects will be developed through a variety of scales to a design development level.

Offered fall semester.

LAND 4060. Landscape Architecture Design Studio VI. 4 hours. Eight studio hours per week.

Prerequisite: LAND 4050.

Corequisite: LAND 4560.

Urban design and architecture. Projects will be developed through a variety of scales to a design development level. The relationship between landscape architecture, architecture, and urban design.

Offered spring semester.

LAND 4070/6070. Garden Design in America. 4 hours. Eight studio hours per week.

Prerequisite: LAND 4060 or LAND 6020.

Design traditions which have shaped American gardens over the past 200 years with emphasis on the twentieth century, and plants, uses, design forms, and environmental conditions through which these traditions have been expressed. Designing gardens informed by traditional models.

Not offered on a regular basis.

LAND 4080/6080. Gardens as Nurturing Environments. 4 hours. Eight studio hours per week.

Prerequisite: LAND 4060 or LAND 6020.

Physical, psychological, perceptual, and cultural influences of garden design, with an emphasis on gardens for healing, play, discovery/learning, and other sensory/therapeutic stimuli.

Not offered on a regular basis.

LAND 4150/6150. Land Development Studio. 4 hours. Eight studio hours per week.

Prerequisite: LAND 4060 or LAND 6340.

Land development process. Landscape architecture and real estate students prepare a report that includes absorption, targeted market, estimates, financial feasibility, site planning, design, and building types to be reviewed by a visiting jury of developers, designers, planners, and brokers.

Not offered on a regular basis.

LAND 4250. Portfolio Development. 2 hours. Two 2-hour lab periods.

Prerequisite: EDES 4240.

Portfolio/resume preparation and interviewing techniques. Landscape architecture registration exam preview and preparation of design competition packages.

Offered spring semester.

LAND 4360. Applied Landscape Ecology. 3 hours.

Two lectures and one 2-hour lab period.

Prerequisite: LAND 2310.

The concept and functioning of ecosystems and how this understanding can be applied in environmental design. Review of adverse impacts that can result from failure to apply sound ecological principles. Exercises will include some conceptual manipulation of ecological processes and materials.

Offered fall semester.

LAND 4370. Applied Landscape Construction. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: LAND 2320.

Detailing of architectural and planting elements in the landscape with an emphasis on appropriate detailing for sustainability and longevity in urban contexts.

Offered spring semester.

LAND 4380. Landscape Architecture Implementation Documents. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: LAND 3340 and LAND 4060 and LAND 4370.

Construction, engineering, and planting documents for implementing landscape architecture projects.

Offered fall semester.

LAND 4390. Landscape Architecture Post-Construction Documents and Processes. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: LAND 4060.

Post-construction processes and documents relevant to the implementation and management of designed and natural landscapes. Includes development of landscape management plans, and post-construction evaluation.

Offered spring semester.

LAND 4400/6400. Plant Communities of the Southeast. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: LAND 4360 or LAND 6320.

The plant communities of the southeastern United States, with emphasis on botanical and aesthetic characteristics, factors affecting community composition, and community dynamics.

Not offered on a regular basis.

LAND 4550. Region, Site and Place. 2 hours.

Prerequisite: LAND 3540.

Corequisite: LAND 4050.

Physical and cultural determinants of landscape character from regional to site-specific scales.

Offered fall semester.

LAND 4560. Urban Design and Architecture: Ideas and Theories. 2 hours.

Prerequisite: LAND 4550.

Corequisite: LAND 4060.

Urban design and architecture including analysis of various theories used as a framework for the development of architectural and urban form.

Offered spring semester.

LAND 4570. Contemporary Landscape Architecture Theory. 2 hours.

Prerequisite: LAND 4560.

Contemporary issues and theories in landscape architecture. Emphasis is on the relationship between theoretical approaches and built form.

Offered fall semester.

LAND 4580/6580. Landscapes in Painting, Poetry, Literature, and Design. 2 hours.

Prerequisite: EDES 1500 or EDES 6520.

The appreciation and understanding of nature, landscape, and garden in painting, poetry, and literature. Study of how changing attitudes to the environment affect aesthetic appreciation of landscape and are reflected in the design of gardens and the description of landscapes in art and literature.

Not offered on a regular basis.

LAND 4700. Landscape Architecture Internship. 8 hours.

Prerequisite: Permission of school.

Professional office experience under the supervision of licensed landscape architect or related practitioner.

Non-Traditional Format: Internship conducted off-site in professional offices. A minimum of two-months full-time supervised employment for eight credits.

Offered summer semester.

LAND 4710/6710. Professional Practice. 2 hours.

Prerequisite: Junior standing.

The legal environment of business focusing on public and private law. Professional relations during project management, resolution of disputes, the court system, torts, real property/liens, contract law, specification writing, insurance bonds, business organizations, ethics, and professional registration.

Offered fall semester.

LAND 4720. Senior Project Proposal. 1 hour.

Prerequisite: LAND 4060.

The preparation of a proposal for a senior project.

Offered fall semester.

LAND 4800/6800. Field Study in Contemporary Landscape Architecture. 3 hours. One 3-hour lab period.

Prerequisite: (LAND 2020 and EDES 2520) or permission of school.

Current and historic works and individuals in the fields of landscape architecture, architecture, historic preservation, and urban design in the United States. The class will visit significant projects, offices, national parks, and landmarks during a ten to fourteen-day trip to another region of the country.

Non-Traditional Format: Field study.

Not offered on a regular basis.

LAND 4810/6810. Field Study in American Garden Design. 2 hours.

Prerequisite: LAND 4070/6070.

Recognized professional firms, garden designers, and gardens central to the evolution and current culture of garden design in America.

Non-Traditional Format: Course consists of a 10-11 day field trip to earn two hours credit.

Not offered on a regular basis.

LAND 4900. Senior Project. 8 hours. Two 4-hour lab periods.

Prerequisite: LAND 4720.

A comprehensive design or research project in which the student is able to demonstrate the proficiency acquired in the professional program of study.

Offered spring semester.

LAND 4910/6910. Independent Project. 2-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of school.

Special study or project under the direction of faculty.

Offered fall, spring, and summer semesters.

Landscape Architecture / Latin

LAND 4960H. Directed Projects in Landscape Architecture (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

LAND 4970H. Directed Projects in Landscape Architecture (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

LAND 4980H. Directed Projects in Landscape Architecture (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

LAND 4990H. Honors Thesis in Landscape Architecture. 8 hours. Two 4-hour lab periods.

Prerequisite: Permission of Honors.

Individual research in major field or in a closely related field.

Offered fall, spring, and summer semesters.

(LATN) Latin

College of Arts and Sciences, Department of Classics

LATN 1001. Elementary Latin I. 4 hours.

The Latin language; pronunciation, fundamentals of grammar, reading, and translation.

Offered fall and spring semesters.

LATN 1002. Elementary Latin II. 4 hours.

Prerequisite: LATN 1001.

Completion of study of Latin grammar and syntax begun in Elementary Latin I, with continuation of reading and translation.

Offered fall and spring semesters.

LATN 2001. Intermediate Latin I. 3 hours.

Prerequisite: LATN 1002.

Translating continuous Latin passages through readings from Cicero's orations, with brief selections from Caesar's Gallic Wars and from Latin poetry. Systematic review of Latin grammar and syntax.

Offered fall and spring semesters.

LATN 2002. Intermediate Latin II: Golden Age Latin Literature. 3 hours.

Prerequisite: LATN 2001.

Golden Age Latin prose and poetry. Prose readings

selected from Livy or Cicero; verse readings from Catullus, Vergil, or Ovid.

Offered fall and spring semesters.

LATN 3010. Vergil's *Aeneid*. 3 hours.

Prerequisite: LATN 2002.

Latin poetry, poetic syntax, meter, and style through readings from Vergil's *Aeneid*, including selections from *Aeneid* books 3, 5, or 7-12, and others.

Offered fall and spring semesters.

LATN 4010/6010. Roman Rhetoric. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the orations and rhetorical writings of Cicero, Quintilian, Seneca Rhetor, and others.

Not offered on a regular basis.

LATN 4020/6020. Roman Epic Poetry. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the Latin epic poets Ennius, Vergil, Lucan, and others.

Not offered on a regular basis.

LATN 4030/6030. Roman Historians. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from Roman historical writers such as Caesar, Sallust, Ammianus Marcellinus, and others.

Not offered on a regular basis.

LATN 4040/6040. Roman Elegy. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the elegiac works of Tibullus/Sulpicia, Propertius, and Ovid, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction.

Not offered on a regular basis.

LATN 4050/6050. Roman Epistles. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from the letters of Cicero, Seneca, Pliny the Younger, and others.

Not offered on a regular basis.

LATN 4060/6060. Roman Satire. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.

Readings from such satirists as Horace, Juvenal, and others.

Not offered on a regular basis.

LATN 4070/6070. Roman Drama. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the comedies of Plautus and Terence, and the tragedies of Seneca, and others.
Not offered on a regular basis.

LATN 4080/6080. Roman Didactic Poetry. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from Lucretius' *De Rerum Natura*, Vergil's *Georgics*, and others. The poet as teacher; the manner in which poetic form and imagery express philosophy.
Not offered on a regular basis.

LATN 4090/6090. Latin of Later Antiquity and the Middle Ages. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from Latin authors of late antiquity and the Middle Ages. Study of Latin vocabulary and style during late antiquity and the Middle Ages.
Not offered on a regular basis.

LATN 4100/6100. Roman Biography. 3 hours. Repeatable for maximum 6 hours credit.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from Latin biographical authors such as Nepos, Suetonius, Tacitus, the *Scriptores Historiae Augustae*, and Einhard.
Not offered on a regular basis.

LATN 4200/6200. Catullus. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the *Carmina* of Catullus, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction.
Not offered on a regular basis.

LATN 4210/6210. Horace. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the works of Horace, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction.
Not offered on a regular basis.

LATN 4220/6220. Ovid. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the *Metamorphoses* and non-elegiac works of Ovid, including studies in the cultural context of Roman poetry, as well as the development of Latin poetic form, meter, and diction.
Not offered on a regular basis.

LATN 4300/6300. Cicero and the Roman Republic. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the orations and other works of Cicero, and from the works of Caesar, Sallust, and other contemporary writers.
Not offered on a regular basis.

LATN 4310/6310. Livy. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the *Ab Urbe Condita* of Livy, with attention to literary and historical issues surrounding the author and his works.
Not offered on a regular basis.

LATN 4320/6320. Tacitus. 3 hours.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings from the *Annales*, *Historiae*, and/or minor works of Tacitus, with attention to literary and historical issues surrounding the author and his works.
Not offered on a regular basis.

LATN 4400/6400. Advanced Readings in Latin. 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Undergraduate level only: LATN 3010; Graduate level only: Permission of department.
Readings in one or more Latin authors or genres. Topics to be selected on the basis of student needs.
Not offered on a regular basis.

(LEGL) Legal Studies

Terry College of Business, Department of Insurance, Legal Studies, Real Estate and Management Science

LEGL 2700. Legal and Regulatory Environment of Business. 3 hours.
Not open to students with credit in LEGL 2800H.
The legal and regulatory environment of business, emphasizing why legal duties are placed on the business community and how managers should appropriately respond to them. Covers legal institutions, constitutional law, common law, and public law.
Offered on a regular basis.

LEGL 2800H. Legal and Regulatory Environment of Business (Honors). 3 hours.
Not open to students with credit in LEGL 2700.
Prerequisite: Permission of Honors.
The legal and regulatory environment of business, emphasizing why legal duties are placed on the business community and how managers should appropriately respond to them. Covers legal institutions, constitutional law, common law, and public law.
Offered on a regular basis.

LEGL 4100H. Current Issues in Legal Studies (Honors). 3 hours.

Prerequisite: LEGL 2700 and permission of Honors.
Legal issues of current importance to business managers designed to develop critical legal thinking skills.
Offered on a regular basis.

LEGL 4300/6300. Law of Business Organizations. 3 hours.

Prerequisite: LEGL 2700.
A managerial, entrepreneurial focus on the law applicable to forming partnerships, corporations and other business entities, raising capital and structuring relationships with agents, employees, partners, officers, and directors.
Offered on a regular basis.

LEGL 4400/6400. Business Law. 3 hours.

Prerequisite: LEGL 2700.
Debtor-creditor relations, commercial paper, contracts, securities, agency, partnership, joint ventures, corporations, professional and legal responsibility, sales, secured transactions, bankruptcy.
Offered on a regular basis.

LEGL 4500/6500. Employment Law. 3 hours.

Laws prohibiting employment discrimination based on race, gender (including sexual harassment), religion, national origin, age, and disability, with an emphasis on avoiding unnecessary liability.
Offered on a regular basis.

LEGL 4600. Negotiation and Alternative Dispute Resolution Systems. 3 hours.

Styles of negotiation as a tool used to resolve and reduce conflicts and disputes. Also studied are ADR systems, such as arbitration and mediation.
Offered on a regular basis.

LEGL 4900. International Legal Transactions for Business. 3 hours.

Prerequisite: LEGL 2700.
Laws, agreements, and institutions that affect international business transactions with particular emphasis on licensing, exporting, contract formation, dispute resolution, intellectual property rights, and cultural, political, and ethical problems.
Offered on a regular basis.

LEGL(REAL) 5200. Real Estate Law. 3 hours.

Prerequisite: REAL 4000.
How law impacts real estate, its ownership, conveyance, and development. Real property ownership interests, restrictions on such interest, methods of transferring such interest, private and public land-use controls, and legal transactions involving real estate, such as gifts, sales, and leases.
Offered on a regular basis.

(LING) Linguistics

College of Arts and Sciences, Linguistics Program

LING 1810. Elementary Biblical Hebrew I. 4 hours.

Not open to students with credit in HEBR 1001.
A study of classical Hebrew grammar.
Offered fall semester.

LING 1820. Elementary Biblical Hebrew II. 4 hours.

Not open to students with credit in HEBR 1002.
Prerequisite: HEBR 1001 or LING 1810.
A study of classical Hebrew grammar.
Offered spring semester.

LING 1910. Elementary Standard Arabic I. 4 hours.

Not open to students with credit in ARAB 1001.
Fundamentals of grammar, pronunciation, reading, composition, and conversation of standard (including classical) Arabic.
Offered fall semester.

LING 1920. Elementary Standard Arabic II. 4 hours.

Not open to students with credit in ARAB 1002.
Prerequisite: ARAB 1001 or LING 1910.
Fundamentals of grammar, pronunciation, reading, composition, and conversation of standard (including classical) Arabic.
Offered spring semester.

(LING)CLAS 2010. The Nature of the English Vocabulary. 3 hours.

The nature and composition of the English vocabulary, with particular attention to Greek and Latin elements, and its development among diverse cultures and societies; techniques of morphological analysis, allomorphy, derivational morphology, formal and semantic change, and Indo-European etymology.
Offered fall and summer semesters.

LING 2100. The Study of Language. 3 hours.

The scientific study of language, emphasizing such topics as the organization of grammar, language in space and time, and the relationship between the study of language and other disciplines.
Offered fall and spring semesters.

LING 2100H. The Study of Language (Honors). 3 hours.

Not open to students with credit in LING 2100.
Prerequisite: Permission of Honors.
The scientific study of language, emphasizing such topics as the organization of grammar, language in space and time, and the relationship between the study of language and other disciplines.
Offered fall semester.

LING 2830. Intermediate Biblical Hebrew I. 3 hours.
Not open to students with credit in HEBR 2003.
Prerequisite: HEBR 1002 or LING 1820.
Classical Hebrew grammar, with reading of selected texts from the Hebrew Bible/Old Testament.
Offered fall semester.

LING 2840. Intermediate Biblical Hebrew II. 3 hours.
Not open to students with credit in HEBR 2004.
Prerequisite: HEBR 2003 or LING 2830.
Readings of Hebrew texts selected from the Hebrew Bible/Old Testament, Dead Sea Scrolls, or early rabbinic literature.
Offered spring semester.

LING 2930. Intermediate Standard Arabic I. 3 hours.
Not open to students with credit in ARAB 2003.
Prerequisite: ARAB 1002 or LING 1920.
Intermediate grammar, reading, conversation, and composition in standard (including classical) Arabic. Particular attention will be given to readings in Islamic literature.
Offered fall semester.

LING 2940. Intermediate Standard Arabic II. 3 hours.
Not open to students with credit in ARAB 2004.
Prerequisite: ARAB 2003 or LING 2930.
Intermediate grammar, reading, conversation, and composition in standard (including classical) Arabic. Particular attention will be given to readings in Islamic literature.
Offered spring semester.

LING(ENGL) 3020. Language Variation. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
Theory and assessment of regional and social language variation within one language, including the relationship of variation to language change. Historical and present-day illustrations come primarily from English, with consideration of the significance of language variation in our modern social context.
Offered every year on a regular basis.

(LING)ENGL 3030. Introduction to the English Language. 3 hours.
Prerequisite: ENGL 1102 or ENGL 1030.
The history, structure, and modern varieties of the English language.
Offered on a regular basis.

(LING)SPAN 3050. Introduction to Spanish Linguistics. 3 hours.
Prerequisite: SPAN 3010.
Fundamentals of language in general and Spanish in particular. Linguistic knowledge, language variation, and language contact phenomena. Representative Spanish sound systems, syllabic structure, sentence patterns, structure and meaning of words. Analysis of data from oral and written registers. Given in Spanish.
Offered every year on a regular basis.

LING 3060. Phonetics and Phonology. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
Phonetic transcription of various languages dictated by native and non-native speakers; understanding of the phonetic principle by the solution of selected problems which consist of phonetically transcribed data.
Offered every year on a regular basis.

(LING)ANTH 3080. Anthropology of Language. 3 hours.
Prerequisite: ANTH 1102 or LING 2100 or permission of department.
Anthropological studies in language, including origins and evolution, prehistory, geographical distribution, typology and classification, language and speech communities. Relationships between language and culture, language and society, and language and environment will be emphasized.
Not offered on a regular basis.

(LING)FREN 3090. Introduction to French Linguistics. 3 hours.
Prerequisite: FREN 3010.
The field of French linguistics, emphasizing such topics as the internal and external history of French; the sounds, forms, and vocabulary of modern French; and the linguistic variation within France and the French-speaking world.
Offered every year on a regular basis.

LING(ENGL) 3150. Generative Syntax. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
Techniques and formalisms for analyzing syntactic phenomena of human languages within the framework of generative grammar. Examples will be drawn primarily from English.
Offered every year on a regular basis.

(LING)GRMN 3380. Contrastive Grammar of English and German. 3 hours.
Prerequisite: GRMN 2002.
Contrastive analysis of German and English phonology and grammar. Prepares future teachers of German to identify pedagogically important structural differences between English and German.
Offered every year on a regular basis.

LING 3830. Languages of the World. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
The classification and distribution of languages of the world and a survey of linguistic structures as exemplified by selected languages.
Offered on a regular basis.

(LING)ENGL 4000/6000. History of the English Language. 3 hours.
Prerequisite: Permission of department.
The development of present English through the stages

Linguistics

of Old English, Middle English, and early Modern English. Study of elementary phonetics, phonemics, sound change, and dialect variation.
Offered spring semester.

(LING)ENGL 4010/6010. American English. 3 hours.
Prerequisite: Permission of department.
The history, present status, and future prospects of American English, including standards and internal variation.
Not offered on a regular basis.

(LING)ENGL 4060/6060. Old English. 3 hours.
Prerequisite: Permission of department.
The language and literature of England before the Norman Conquest, with reading of selected texts.
Offered fall semester.

(LING)ANTH 4090/6090. Cognitive Anthropology. 3 hours.
Prerequisite: ANTH 1102 or permission of major.
Folk systems of knowledge, with an emphasis on how people in different societies culturally identify, define, label, and classify phenomena such as color terms, plants, animals, and other environmental resources.
Not offered on a regular basis.

(LING)ENGL 4110/6110. English Grammar. 3 hours.
Prerequisite: Permission of department.
English grammar in the scholarly tradition of Curme and Jespersen.
Offered spring semester.

(LING)CMSD 4120/6120. Anatomy and Physiology of Speech, Voice, and Hearing. 3 hours.
Prerequisite: Permission of department.
Anatomical structures and basic physiological functions underlying audition, respiration, phonation, articulation, resonance, and swallowing.
Offered fall semester.

(LING)CMSD 4140/6140. Introduction to Speech and Voice Science. 3 hours.
Prerequisite: CMSD 4090/6090 and CMSD (LING) 4120/6120 and PSYC 1101 and (MATH 1101 or PHYS 1010 or permission of department).
Application of basic physical principles to production and perception of speech and voice. Biomechanics of vocal fold oscillation; acoustics of voice source; resonance; acoustic phonetics; psychoacoustics of speech and voice. Interpretation of objective measures and outputs of computational models.
Offered spring semester.

(LING)ENGL 4170/6170. Second Language Acquisition. 3 hours.
Prerequisite: ENGL(LING) 4110/6110 or permission of department.
Linguistic theories of second language acquisition, with emphasis on the acquisition of English. Topics

include order of acquisition, sociocultural factors with linguistic bases, and neurolinguistic models.
Not offered on a regular basis.

(LING)ENGL 4180/6180. ESL Error Analysis. 3 hours.
Prerequisite: ENGL(LING) 4110/6110 or permission of department.
Psycholinguistic theory applied to problems in second language learning, and the prediction of language behavior through the use of contrastive analysis.
Not offered on a regular basis.

LING 4210/6210. Introduction to Indo-European Studies. 3 hours.
Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.
The Indo-European language family: the various early Indo-European dialects, their grammatical structures, and the evolution of those structures from the proto-language.
Offered every odd-numbered year on a regular basis.

(LING)PHIL 4300/6300. Philosophy of Language. 3 hours.
Prerequisite: Permission of department.
Topics such as formal and ordinary languages, meaning, reference, truth, definition, analyticity, ambiguity, metaphor, symbolism, and the uses of language.
Offered every even-numbered year on a regular basis.

(LING)GRMN 4460/6460. Structure of Modern German. 3 hours.
Prerequisite: GRMN 3010.
Linguistic and sociolinguistic structure of modern German with relevant linguistic terminology. Emphasis on phonology, morphology, and syntax. Taught in English.
Offered every year on a regular basis.

(LING)CMSD 4500/6500. Study of Language Development. 3 hours.
Prerequisite: CMSD 4130/6130 or permission of department.
Normal development of children's reception, integration, and expression of linguistic information; cultural, gender, socioeconomic, cognitive, and prelinguistic influences on language development.
Offered on a regular basis.

(LING)PHIL 4510/6510. Deductive Systems. 3 hours.
Prerequisite: PHIL 2500.
Symbolic-mathematical logic, examining the propositional and predicate calculi, with emphasis on problems in translation and formalization and topics in the philosophy of logic and mathematics.
Offered fall semester.

(LING)PHIL 4520/6520. Model Theory. 3 hours.

Prerequisite: PHIL(LING) 4510/6510.

Formal semantics for sentential and first-order predicate logic, including both soundness and completeness results for first-order logic. Additional topics may include Goedel's incompleteness results, the Skolem-Lowenheim theorem, or possible world semantics for modal logics.

Offered spring semester of even-numbered years.

LING(CLAS) 4610/6610. Sanskrit I. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The phonology, morphology, and syntax of the classical Sanskrit language, emphasizing the position of Sanskrit within the Indo-European language family and its importance for Indo-European linguistics.

Offered every odd-numbered year on a regular basis.

LING(CLAS) 4620/6620. Sanskrit II. 3 hours.

Prerequisite: LING(CLAS) 4610/6610.

Continued studies in both the synchronic and diachronic grammar of classical Sanskrit.

Offered every odd-numbered year on a regular basis.

(LING)FREN 4630. French Phonetics. 3 hours.

Prerequisite: FREN(LING) 3090.

The French sound system in theory and practice. How French sounds are formed and how they reflect social class and geographical origin. Work on pronunciation in class and the language laboratory. Given in French.

Offered every year on a regular basis.

(LING)SPAN 4650. Spanish Phonetics and Language Variation. 3 hours.

Prerequisite: SPAN(LING) 3050.

Speech organs and systematic description of Spanish sounds. Comparison of English and Spanish patterns of stress, pronunciation, and intonation. Examination of recurrent pronunciation errors. Description of major geographical and social dialects. Practice in pronunciation and transcription of sounds. Given in Spanish.

Offered every year on a regular basis.

LING 4690/6690. Historical Linguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

Traditional methods of historical linguistics are reviewed, with examples from several different language families. Various kinds of possible phonological and syntactic changes are investigated in relation to modern linguistic theory.

Offered every odd-numbered year on a regular basis.

LING 4710/6710. Languages in Contact. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The influence of languages on other languages spoken in the same or neighboring areas, including pidgins and creoles, with consideration of relationships in phonology, morphology, syntax, semantics, and vocabulary. Not offered on a regular basis.

LING 4850. Elementary Aramaic/Syriac. 3 hours.

Not open to students with credit in SEMI 4001.

Prerequisite: HEBR 2004 or LING 2840 or permission of department.

Aramaic and/or Syriac grammar, especially as related to Hebrew, along with simple readings from religious texts. Not offered on a regular basis.

LING(ANTH) 4860/6860. Sociolinguistics. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The study of language as a cultural and social phenomenon. Topics include language and meaning, language and world view, language and social behavior, and language and social issues.

Offered every even-numbered year on a regular basis.

LING(CMLT) 4870/6870. Language, Gender, and Culture. 3 hours.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The role of language and culture in the formation of philosophical assumptions about gender differentiation in society.

Offered every year on a regular basis.

LING 4900/6900. Topics in Indo-European Linguistics. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: LING 2100 or ENGL(LING) 3030 or permission of department.

The synchronic and diachronic grammar of an older Indo-European language. Possible offerings include Avestan, Hittite, Lithuanian, Old Church Slavonic, and Old Irish or topics such as Indo-European phonology, morphology, or syntax.

Offered every even-numbered year on a regular basis.

LING 4910. Special Topics in Linguistics. 3-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: [LING 2100 or ENGL(LING) 3030] and permission of department.

Reading and discussions of current developments and issues in linguistics.

Not offered on a regular basis.

LING 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: [LING 2100 or ENGL(LING) 3030] and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

LING 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: [LING 2100 or ENGL(LING) 3030] and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

LING 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: [LING 2100 or ENGL(LING) 3030] and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

LING 4990H. Honors Thesis. 3 hours.

Prerequisite: [LING 2100 or ENGL(LING) 3030] and permission of Honors.

Individual research for preparation of a thesis.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Not offered on a regular basis.

(MARK) Marketing

Terry College of Business, Department of Marketing and Distribution

MARK 3000. Principles of Marketing. 3 hours.

Prerequisite: (ACCT 2101 and ACCT 2101L) or (MGMT 2090 and MGMT 2090L) or MSIT 3000.

The ways organizations satisfy consumer and organizational needs and wants for products and services. Markets; buyer behavior; marketing research; segmenting, targeting and positioning; and product, place, price, and promotional strategies. Concepts, strategies, applications, and marketing methods used to generate revenues in domestic and global settings.

Offered on a regular basis.

MARK 3000H. Principles of Marketing (Honors). 3 hours.

Not open to students with credit in MARK 3000.

Prerequisite: [(ACCT 2101 and ACCT 2101L) or (MGMT 2090 and MGMT 2090L) or MSIT 3000] and permission of Honors.

The ways organizations satisfy consumer and organizational needs and wants for products and services. Markets, buyer behavior, market research, segmentation, and positioning with product, place, price, and promotional strategies. Concepts, strategies, applications, and marketing methods used to generate revenues in domestic and global settings.

Offered on a regular basis.

MARK 4000. Marketing Research for Business Decisions. 3 hours.

Prerequisite: MARK 3000.

Consumer and organizational buyer behavior processes. Internal and external influences on decision making, as well as similarities and differences between consumer and organizational choice processes. Concepts from economics and the behavioral sciences to help explain purchase and consumption behavior.

Offered on a regular basis.

MARK 4100. Consumer and Organizational Buyer Behavior. 3 hours.

Prerequisite: MARK 3000.

The value of marketing research in the context of business decision making. The course first stresses the process of obtaining information, and then emphasizes the use of this information to develop new products, market to specific segments, monitor the business environment, perform competitive analyses, and so forth. Offered on a regular basis.

MARK 4200. Sales Force Strategy and Management. 3 hours.

Prerequisite: MARK 4000 or MARK 4100.

Managing the marketing-driven sales force, including customer relationship and interfacing strategies, cross-functional issues relevant to sales, sales force organization strategies and systems, and customer-focused teams. Human resource issues, such as compensation systems, salesperson development, sales team leadership, and sales training and coaching.

Offered on a regular basis.

MARK 4250. Account Management and Professional Selling. 3 hours.

Prerequisite: MARK 4200.

Developing and managing a relationship or partnership with a key or national account. Professional selling, including customer opportunity analysis, problem identification, needs assessment, value analysis, and value-based selling. Contact manager systems and role-plays are used to teach selling competencies.

Offered on a regular basis.

MARK 4300. Information Technology and Marketing. 3 hours.

Prerequisite: MARK 4000 or MARK 4100.

How marketers have utilized advances in information technology. Converting information provided by electronic scanning, emerging media such as the World Wide Web, and conventional record-keeping into actionable knowledge. The emergence of database marketing, frequency and relationship marketing programs, and direct marketing provide the context.

Offered on a regular basis.

MARK 4400. Logistics and Channel Strategy. 3 hours.

Prerequisite: MARK 4000 or MARK 4100.

Logistical practices associated with integrated supply chain management. Identifying logistical support needed as well as strategies for effectively managing distribution channel relationships; e.g., interactions between channel participants, including manufacturers, various intermediaries such as wholesalers or retailers, and external service providers.

Offered on a regular basis.

MARK 4500. Product and Service Marketing. 3 hours.

Prerequisite: MARK 4000 or MARK 4100.

This course describes product and service options and compares and contrasts how product and service ideas are developed, priced, promoted, branded, and distributed.

Offered on a regular basis.

MARK 4600. Advertising and Sales Promotion. 3 hours.

Prerequisite: MARK 4000 or MARK 4100.

Advertising and promotion management. Emphasizes advertising and sales promotion in an organization's marketing communications program. Strategic integration and coordination of all elements of the promotion mix and the legal, ethical, and moral implications of promotion.

Offered on a regular basis.

MARK 4700. International Marketing. 3 hours.

Prerequisite: MARK 3000.

The scope and challenge of international marketing. Emphasizes the cultural dimensions of world markets. Marketing variables will be discussed in terms of developing and executing strategies in different countries.

Offered on a regular basis.

MARK 4800. Marketing Internship Cooperative. 3 hours.

Prerequisite: MARK 3000.

Students are permitted to enter business organizations to obtain practical and applied marketing experience. A paper describing and analyzing this experience is required.

Non-Traditional Format: This course is designated for undergraduate internship and does not meet formally.

Offered on a regular basis.

MARK 4900. Marketing Strategies and Decision Making. 3 hours.

Prerequisite: MARK 4000 or MARK 4100 or permission of department.

This course serves as the capstone marketing course. It builds on knowledge gained from previous courses to solve marketing problems in a global environment. The course seeks to develop skills in integrating the functions of marketing toward forming strategy decisions.

Offered on a regular basis.

(MARS) Marine Sciences

College of Arts and Sciences, Department of Marine Sciences

MARS 1010-1010L. Marine Environment I. 4 hours.

Three lectures and one 2-hour lab period.

Not open to students with credit in BIOL 1103-1103L, BIOL 1107-1107L, or BTNY 1210-1210L.

Diversity and functioning of marine life; characteristics of the marine environment; influence of abiotic factors

on the distribution and abundance of marine organisms; the effects of human activity on marine environment and resources.

Offered fall semester.

MARS 1020-1020L. Marine Environment II. 4 hours.

Three lectures and one 2-hour lab period.

Not open to students with credit in BIOL 1104-1104L, BIOL 1108-1108L, or BTNY 1220-1220L.

Prerequisite: MARS 1010-1010L.

Biological and physical processes in marine environments, structure and function of marine food webs, the role of the oceans in global cycles.

Offered spring semester.

MARS 3000. Coastal Zone and Marine Law. 3 hours.

Not open to students with credit in FORS 5820/7820.

Prerequisite: Junior or senior standing.

The major statutes, regulations, and litigation histories of the coastal margins and near-shore marine waters. Source and status of rights, preservation, and allocation of resources; cooperative management, pollution control, current systems perspective, and law of the sea.

Offered fall semester.

MARS 3450-3450L. Marine Biology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L or (CHEM 2212 and CHEM 2212L).

The origin and distribution of life in the sea, marine primary and secondary production, with focus on the ecological dynamics of population growth and maintenance in the world's oceans. Comparison of marine biological systems with terrestrial biological systems to elucidate their common or unique physiological and ecological processes.

Offered spring semester.

(MARS)FORS 3570. The Law of Earth Protection and Resource Use. 3 hours.

Not open to students with credit in AAEC 4930/6930 or FORS 5820/7820.

A first course in legal studies, and an introduction to environmental and natural resources law. Basics of the legal system; selected major protection and resource statutes, regulations, roles and methods of agencies; significant judicial opinions.

Offered spring semester.

MARS 3900. Introduction to Experimental Marine Sciences. 1-4 hours. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Investigation of a defined problem in marine science under the direction of a faculty member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MARS 4100/6100. General Oceanography I. 3 hours.
Prerequisite: CHEM 1212 and CHEM 1212L and PHYS 1112-1112L and (GEOL 1260-1260L or BIOL 1108-1108L).

Structure, composition, dynamics of the oceans. Physical, chemical, biological, and geological processes in the oceans, emphasizing the interaction among the scientific disciplines to understand how the marine system functions.

Offered fall and spring semesters.

MARS 4110/6110. General Oceanography II. 3 hours.

Prerequisite: MARS 4100/6100.

A continuation of General Oceanography I, with emphasis on chemical and biological processes.

Offered fall semester.

MARS(FORS) 4380/6380-4380L/6380L. Marine Fisheries Biology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L and permission of department.

Interaction of oceanographic processes with the life histories and productivity of marine fisheries species, and the human interactions with major marine fisheries.

Offered spring semester.

MARS 4450/6450. Introduction to Marine Chemistry. 3 hours.

Not open to students with credit in MARS 8020-8020L.

Prerequisite: CHEM 1212 and CHEM 1212L and PHYS 1212-1212L and MATH 2200, 2200L and MARS 4110/6110.

Chemical properties of oceanic systems, oceanic acid base equilibrium, redox chemistry, nutrient cycling, and radioactive processes.

Offered fall semester.

MARS 4500/6500. Field Study in Oceanography and Marine Methods. 5 hours. Fifteen lectures and five 5-hour lab periods.

Prerequisite: Permission of department.

Laboratory and fieldwork in chemical, biological, sedimentological, and physical oceanographic processes and methods in southeast estuarine, coastal, and shelf environments.

Non-Traditional Format: A field study course taught off-campus.

Offered summer semester.

MARS 4510/6510. Field Study in Oceanography and Marine Methods: Independent Research. 3-7 hours. Repeatable for maximum 7 hours credit. Five 8-hour lab periods.

Prerequisite: Permission of department.

Independent field research on oceanographic processes. Non-Traditional Format: A field study course taught off-campus.

Offered fall, spring, and summer semesters.

MARS(MIBO) 4620/6620-4620L/6620L. Microbial Ecology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500 or permission of department. Emphasizes the roles of microorganisms in ecosystems. Nutrient cycles, methods of microbial analysis, and the functional roles of microorganisms.

Offered spring semester of even-numbered years.

MARS 4810/6810. Microbial Biogeochemistry. 3 hours.

Prerequisite: [MIBO 3500 and BCMB (BIOL) (CHEM 3100)] or permission of department.

The microbial processes which are or have been important in modifying the earth's lithosphere, hydrosphere and atmosphere. Microbially mediated precipitation and solubilization of minerals, cycling of dissolved and particulate organic matter in natural waters, and the physiological ecology of microorganisms adapted to extreme environments.

Offered spring semester of odd-numbered years.

(MATH) Mathematics

College of Arts and Sciences, Department of Mathematics

MATH 1060. Mathematics of Decision Making. 3 hours.

Applications of modern mathematics to management and decision making including the solution of optimization problems using network theory, methods for optimal scheduling, voting methods, game theory, and related strategies. Applications include planning of postal delivery routes, placement of cable television lines, United States Congressional apportionment, and dispute resolution.

Offered fall, spring, and summer semesters.

MATH 1090. Trigonometry. 3 hours.

Not open to students with credit in MATH 1113.

Trigonometry with an emphasis on geometric applications.

Offered fall and spring semesters.

MATH 1101. Mathematical Modeling. 3 hours.

Mathematical modeling using graphical, numerical, symbolic, and verbal techniques to describe and explore real-world data and phenomena. The investigation and analysis of applied problems and questions, and of effective communication of quantitative concepts and results.

Offered fall, spring, and summer semesters.

MATH 1113. Precalculus. 3 hours.

Preparation for calculus, including an intensive study of algebraic, exponential, logarithmic, and trigonometric functions and their graphs. Applications include simple maximum/minimum problems, exponential growth and decay, and surveying problems.

Offered fall, spring, and summer semesters.

MATH 1700. Arithmetic and Problem Solving. 3 hours.

Prerequisite: MATH 1101.

Problem solving and critical thinking involving mathematics particularly appropriate for prospective elementary school teachers. Emphasis will be placed on properties of number systems, basic geometric concepts, and challenging problems involving elementary mathematics.

Offered fall, spring, and summer semesters.

MATH 2110. Calculus for Economics. 3 hours.

Not open to students with credit in MATH 2210, 2210L, MATH 2310H, or MATH 2410H.

Prerequisite: MATH 2200, 2200L.

Topics specifically chosen to meet the needs of the student of economics: the definite integral, functions of several variables, partial derivatives, Lagrange multipliers, and matrices.

Offered spring semester.

MATH 2200. Analytic Geometry and Calculus. 3 hours. Not open to students with credit in MATH 2300H or MATH 2400H.

Prerequisite: MATH 1113.

Corequisite: MATH 2200L.

Introductory differential calculus and its applications. Topics include limits, continuity, differentiability, derivatives of trigonometric, exponential and logarithmic functions, maximum-minimum problems, curve sketching, Newton's method, and antiderivatives.

Offered fall, spring, and summer semesters.

MATH 2200L. Differential Calculus Laboratory. 1 hour.

Corequisite: MATH 2200 or MATH 2300H.

Computer projects exploring topics related to the course content of Analytic Geometry and Calculus.

Offered fall, spring, and summer semesters.

MATH 2210. Integral Calculus. 3 hours.

Not open to students with credit in MATH 2110, MATH 2310H, or MATH 2410H.

Prerequisite: MATH 2200.

Corequisite: MATH 2210L.

Introductory integral calculus and its applications. Topics include Riemann sums, the Riemann integral, the Fundamental Theorem of calculus, techniques of integration, arc length, surface area, volumes, force, work, and an introduction to differential equations.

Offered fall, spring, and summer semesters.

MATH 2210L. Integral Calculus Laboratory. 1 hour.

Corequisite: MATH 2210 or MATH 2310H.

Computer projects exploring topics related to the course content of Integral Calculus.

Offered fall, spring, and summer semesters.

MATH 2300H. Differential Calculus (Honors). 3 hours.

Not open to students with credit in MATH 2200.

Prerequisite: MATH 1113 and permission of Honors.

Corequisite: MATH 2200L.

Honors differential calculus and its applications.

Offered fall semester.

MATH 2310H. Integral Calculus (Honors). 3 hours.

Not open to students with credit in MATH 2110, MATH 2210, or MATH 2410H.

Prerequisite: MATH 2200 or MATH 2300H and permission of Honors.

Corequisite: MATH 2210L.

Honors integral calculus.

Offered spring semester.

MATH 2400H. Differential Calculus with Theory (Honors). 4 hours.

Not open to students with credit in MATH 2110, MATH 2210, or MATH 2310H.

Prerequisite: Permission of Honors.

A more rigorous and extensive treatment of differential calculus. Topics include the real numbers, the least upper bound property, limits, continuity, differentiability, and applications. Students with a strong background and interest in mathematics are encouraged to take this course; prior experience with calculus is not required.

Offered fall semester.

MATH 2410H. Integral Calculus with Theory (Honors). 4 hours.

Not open to students with credit in MATH 2110, MATH 2210, or MATH 2310H.

Prerequisite: MATH 2400H and permission of Honors.

A more rigorous and extensive treatment of integral calculus. Topics include the Fundamental Theorem of calculus, applications of integration, logarithms and exponentials, Taylor polynomials, sequences, series, and uniform convergence.

Offered spring semester.

MATH 2500. Multivariable Calculus. 3 hours.

Not open to students with credit in MATH 3510.

Prerequisite: MATH 2210.

Calculus of functions of two and three variables including vectors in two and three dimensions, parametric curves, continuity and differentiability of functions of several variables, directional derivatives, Lagrange multipliers, multiple integration, polar coordinates, Green's theorem, and Stokes' theorem.

Offered fall, spring, and summer semesters.

(MATH) CSCI 2610. Discrete Mathematics for Computer Science. 4 hours.

Prerequisite: CSCI 1301-1301L.

The fundamental mathematical tools used in computer science: sets, relations, and functions; propositional logic, predicate logic, and inductive proofs; summations, recurrences, and elementary asymptotics; counting and discrete probability; undirected and directed graphs; introductory linear algebra, with applications in computer science.

Offered spring semester

MATH 2700. Elementary Differential Equations. 3 hours.

Prerequisite: MATH 2210.

First and second order ordinary differential equations, including physical and biological applications, numerical solutions, and mathematical modeling.

Offered fall, spring, and summer semesters.

MATH 3000. Introduction to Linear Algebra. 3 hours.

Not open to students with credit in MATH 3500.

Prerequisite: MATH 2210.

Theory and applications of systems of linear equations, vector spaces, and linear transformations. Fundamental concepts include: linear independence, basis, and dimension; orthogonality, projections, and least squares solutions of inconsistent systems; eigenvalues, eigenvectors, and applications to Markov chains, difference equations, and quadratic forms.

Offered fall, spring, and summer semesters.

MATH 3100. Sequences and Series. 3 hours.

Prerequisite: MATH 2210.

Precise definitions of limit and convergence concepts; practical tests for convergence of infinite series; power series representations and numerical error estimates; applications to calculus and explicit summation formulae; trigonometric series.

Offered fall and spring semesters.

MATH 3200. Introduction to Higher Mathematics. 3 hours.

Prerequisite: MATH 2210.

Preparation in mathematical reasoning and proof-writing necessary for upper division course work in mathematics. Topics include logic, integers and induction, sets and relations, equivalence relations and partitions, and functions (including injectivity and surjectivity).

Offered fall, spring, and summer semesters.

MATH 3500. Multivariable Mathematics I. 3 hours.

Not open to students with credit in MATH 3000.

Prerequisite: MATH 2210.

Prerequisite or corequisite: MATH 3200.

Vector algebra and geometry; fundamental concepts of linear algebra; linear transformations; differential calculus of functions of several variables; eigenvalues and applications. The sequence of Multivariable Mathematics gives an integrated and more conceptual treatment of the material in Multivariable Calculus and Introduction to Linear Algebra.

Offered fall semester.

MATH 3510. Multivariable Mathematics II. 3 hours.

Not open to students with credit in MATH 2500.

Prerequisite: MATH 3500.

Inverse function theorem and Jacobians; integration in several variables, the change of variables theorem; line integrals, surface integrals, and Stokes' Theorem; applications to physics.

Offered spring semester.

MATH 4000/6000. Modern Algebra and Geometry I. 3 hours.

Prerequisite: (MATH 3000 and MATH 3200) or permission of department.

Abstract algebra, emphasizing geometric motivation and applications. Beginning with a careful study of integers, modular arithmetic, and the Euclidean algorithm, the course moves on to fields, isometries of the complex plane, polynomials, splitting fields, rings, homomorphisms, field extensions, and compass and straightedge constructions.

Offered fall, spring, and summer semesters.

MATH 4010/6010. Modern Algebra and Geometry II. 3 hours.

Prerequisite: MATH 4000/6000.

More advanced abstract algebraic structures and concepts, such as groups, symmetry, group actions, counting principles, symmetry groups of the regular polyhedra, Burnside's Theorem, isometries of $\mathbb{R}^3$, Galois Theory and affine and projective geometry.

Offered spring semester.

MATH 4050/6050. Advanced Linear Algebra. 3 hours.

Prerequisite: MATH 4000/6000.

Orthogonal and unitary groups, spectral theorem; infinite dimensional vector spaces; Jordan and rational canonical forms and applications.

Not offered on a regular basis.

MATH 4080/6080. Advanced Algebra. 3 hours.

Prerequisite: MATH 4010/6010 or permission of department.

Linear algebra, groups, rings, and modules, intermediate in level between Modern Algebra and Geometry I and Algebra. Topics include the finite-dimensional spectral theorem, group actions, classification of finitely generated modules over principal ideal domains and canonical forms of linear operators.

Offered fall semester of even-numbered years.

MATH 4100/6100. Real Analysis. 3 hours.

Prerequisite: (MATH 3100 and MATH 3200) or permission of department.

Metric spaces and continuity; differentiable and integrable functions of one variable; sequences and series of functions.

Offered fall semester.

MATH 4110/6110. The Lebesgue Integral and Applications. 3 hours.

Prerequisite: MATH 4100/6100 or MATH 4200/6200 or permission of department.

The Lebesgue integral with applications to Fourier analysis and probability.

Offered spring semester of even-numbered years.

MATH 4120/6120. Multivariable Analysis. 3 hours.
Prerequisite: MATH 3510 or MATH 4100/6100 or MATH 4200/6200.

The derivative as a linear map, inverse and implicit function theorems, change of variables in multiple integrals; manifolds, differential forms, and the generalized Stokes' Theorem.

Offered spring semester of odd-numbered years.

MATH 4150/6150. Complex Variables. 3 hours.
Prerequisite: (MATH 2500 and MATH 3100) or MATH 3510.

Differential and integral calculus of functions of a complex variable, with applications. Topics include the Cauchy integral formula, power series and Laurent series, and the residue theorem.

Offered every year on a regular basis.

MATH 4200/6200. Point Set Topology. 3 hours.
Prerequisite: MATH 3100 and MATH 3200.

Topological spaces, continuity; connectedness, compactness; separation axioms and Tietze extension theorem; function spaces.

Offered every year on a regular basis.

MATH 4220/6220. Differential Topology. 3 hours.
Prerequisite: MATH 4120/6120 and (MATH 4100/6100 or MATH 4200/6200).

Manifolds in Euclidean space: fundamental ideas of transversality, homotopy, and intersection theory; differential forms, Stokes' Theorem, deRham cohomology, and degree theory.

Offered fall semester of odd-numbered years.

MATH 4250/6250. Differential Geometry. 3 hours.
Prerequisite: (MATH 2500 and MATH 3000) or MATH 3510.

The geometry of curves and surfaces in Euclidean space: Frenet formulas for curves, notions of curvature for surfaces; Gauss-Bonnet Theorem; discussion of non-Euclidean geometries.

Offered every year on a regular basis.

MATH 4300/6300. Introduction to Algebraic Curves. 3 hours.

Prerequisite: MATH 4000/6000 or permission of department.

Polynomials and resultants, projective spaces. The focus is on plane algebraic curves: intersection, Bezout's theorem, linear systems, rational curves, singularities, blowing up.

Not offered on a regular basis.

MATH 4400/6400. Number Theory. 3 hours.

Prerequisite: MATH 4000/6000.

Euler's theorem, public key cryptology, pseudoprimes, multiplicative functions, primitive roots, quadratic reciprocity, continued fractions, sums of two squares and Gaussian integers.

Offered spring semester.

MATH 4450/6450. Cryptology and Computational Number Theory. 3 hours.

Prerequisite: MATH 4000/6000.

Recognizing prime numbers, factoring composite numbers, finite fields, elliptic curves, discrete logarithms, private key cryptology, key exchange systems, signature authentication, public key cryptology.

Not offered on a regular basis.

MATH 4500/6500. Numerical Analysis I. 3 hours.

Prerequisite: MATH 3000.

Prerequisite or corequisite: MATH 3100.

Methods for finding approximate numerical solutions to a variety of mathematical problems, featuring careful error analysis. A mathematical software package will be used to implement iterative techniques for nonlinear equations, polynomial interpolation, integration, and problems in linear algebra such as matrix inversion, eigenvalues and eigenvectors.

Offered fall and spring semesters.

MATH 4510/6510. Numerical Analysis II. 3 hours.

Prerequisite: (MATH 2500 or MATH 3510) and MATH 2700 and MATH 4500/6500.

Numerical solutions of ordinary and partial differential equations, higher-dimensional Newton's method, and splines.

Offered spring semester.

MATH 4600/6600. Probability. 3 hours.

Prerequisite: (MATH 2500 and MATH 3100) or MATH 3510.

Discrete and continuous random variables, expectation, independence and conditional probability; binomial, Bernoulli, normal, and Poisson distributions; law of large numbers and central limit theorem.

Offered every year on a regular basis.

MATH(CSCI) 4630/6630. Mathematical Analysis of Computer Algorithms. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH)2610).

Discrete algorithms (number-theoretic, graph-theoretic, combinatorial, and algebraic) with an emphasis on techniques for their mathematical analysis.

Not offered on a regular basis.

MATH(CSCI) 4670/6670. Combinatorics. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH)2610).

Basic counting principles: permutations, combinations, probability, occupancy problems, and binomial coefficients. More sophisticated methods include generating functions, recurrence relations, inclusion/exclusion principle, and the pigeonhole principle. Additional topics include asymptotic enumeration, Polya counting theory, combinatorial designs, coding theory, and combinatorial optimization.

Offered every year on a regular basis.

Mathematics

MATH(CSCI) 4690/6690. Graph Theory. 3 hours.

Prerequisite: MATH 3000 and (MATH 3200 or CSCI(MATH) 2610).

Elementary theory of graphs and digraphs. Topics include connectivity, reconstruction, trees, Euler's problem, hamiltonicity, network flows, planarity, node and edge colorings, tournaments, matchings, and extremal graphs. A number of algorithms and applications are included.

Offered every year on a regular basis.

MATH 4700/6700. Qualitative Ordinary Differential Equations. 3 hours.

Prerequisite: MATH 2700 and (MATH 3000 or MATH 3500).

Transform methods, linear and nonlinear systems of ordinary differential equations, stability, and chaos.

Offered every year on a regular basis.

MATH 4720/6720. Introduction to Partial Differential Equations. 3 hours.

Prerequisite: MATH 2700 and (MATH 2500 or MATH 3510).

The basic partial differential equations of mathematical physics: Laplace's equation, the wave equation, and the heat equation. Separation of variables and Fourier series techniques are featured.

Offered every year on a regular basis.

MATH 4780/6780. Mathematical Biology. 3 hours.

Prerequisite: MATH 2700 and (MATH 3000 or MATH 3500).

Mathematical models in the biological sciences: compartmental flow models, dynamic system models, discrete and continuous models, deterministic and stochastic models.

Not offered on a regular basis.

MATH 4850/6850. History of Mathematics. 3 hours.

Prerequisite: Senior standing.

The development of mathematical thought from ancient times to the present, paying particular attention to the context of today's mathematics curriculum.

Not offered on a regular basis.

MATH 4900/6900. Topics in Mathematics. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: Senior standing.

A special topic not otherwise offered in the mathematics curriculum.

Not offered on a regular basis.

MATH 4960H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

MATH 4970H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Senior standing and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

MATH 5020/7020. Arithmetic for Middle School Teachers. 3 hours.

Prerequisite: MATH 2200, 2200L.

Operations of arithmetic for middle school teachers; number systems; set theory to study mappings, functions, and equivalence relations.

Not offered on a regular basis.

MATH 5030/7030. Geometry and Measurement for Middle School Teachers. 3 hours.

Prerequisite: MATH 2200, 2200L.

Principles of geometry and measurement for middle school teachers.

Not offered on a regular basis.

MATH 5070/7070. Calculus for Advanced Placement Teachers. 3 hours.

Prerequisite: MATH 2500.

Variable calculus designed to prepare in-service secondary school teachers for effective instruction of advanced placement students. Emphasizes concepts and principles underlying differential and integral calculus of a single variable.

Not offered on a regular basis.

MATH 5200/7200. Foundations of Geometry I. 3 hours.

Prerequisite: MATH 3000 and MATH 3200.

Advanced elementary geometry for prospective teachers of secondary school mathematics: axiom systems and models; the parallel postulate; neutral, Euclidean, and non-Euclidean geometries.

Offered fall and spring semesters.

MATH 5210/7210. Foundations of Geometry II. 3 hours.

Prerequisite: MATH 5200/7200.

Further development of the axioms and models for Euclidean and non-Euclidean geometry; transformation geometry.

Offered spring semester.

MATH 5560/7560. Probability and Statistics for Teachers. 3 hours.

Prerequisite: MATH 2200, 2200L.

Fundamental ideas of probability with particular emphasis on their applications in statistics.

Not offered on a regular basis.

(MGMT) Management

Terry College of Business, Department of Management

MGMT 2090. Introduction to Information Systems in Business. 3 hours.

Not open to students with credit in MGMT 2190H.

Corequisite: MGMT 2090L.

Computer concepts and information technology in business, including hardware and software concepts, fundamentals of information systems, telecommunications, and business-related software packages.

Offered on a regular basis.

MGMT 2090L. Introduction to Information Systems in Business Laboratory. 1 hour. One 1-hour lab period.

Not open to students with credit in CSCI 1100-1100L.

Corequisite: MGMT 2090.

Practical application of business computer concepts and information technology in a laboratory setting.

Offered on a regular basis.

MGMT 2190H. Introduction to Information Systems in Business (Honors). 3 hours.

Not open to students with credit in MGMT 2090.

Prerequisite: Permission of Honors.

Corequisite: MGMT 2190L.

Computer concepts and information technology in business, including hardware and software concepts, fundamentals of information systems, telecommunications, and business-related software packages.

Offered on a regular basis.

MGMT 2190L. Information Systems Laboratory (Honors). 1 hour. One 1-hour lab period.

Not open to students with credit in CSCI 1100-1100L.

Prerequisite: Permission of Honors.

Corequisite: MGMT 2190H.

Practical application of business computer concepts and information technology in a laboratory setting.

Offered on a regular basis.

MGMT 3000. Management of Organizations and Individuals. 3 hours.

Not open to students with credit in MGMT 3000H.

Prerequisite: ACCT 2102 and junior standing.

Management functions and processes as applied to organizations and to individuals in organizations. Topics to be covered include strategy, job and organization design, ethics and social responsibility, diversity, global influences, leadership, motivation, human resource management, and organizational change. Other emerging managerial issues may be introduced.

Offered on a regular basis.

MGMT 3000H. Management of Organizations and Individuals (Honors). 3 hours.

Not open to students with credit in MGMT 3000.

Prerequisite: ACCT 2102 and permission of Honors.

Management functions and processes as applied to

organizations and to individuals in organizations. Topics to be covered include strategy, job and organization design, ethics and social responsibility, diversity, global influences, leadership, motivation, human resource management, and organizational change. Other emerging managerial issues may be introduced.

Offered on a regular basis.

MGMT 4000. Integrated Resource Management. 3 hours.

Not open to students with credit in MGMT 4000H.

Prerequisite: ACCT 2102 and junior standing.

Traditional management, total quality management, just-in-time and constraints management philosophies applied to services and manufacturing. Resource management, the integration of these philosophies, focuses on designing, planning, scheduling, executing, controlling, and measuring operations and their relationships with other functions in providing effective business processes to achieve organizational goals.

Offered on a regular basis.

MGMT 4000H. Integrated Resource Management (Honors). 3 hours.

Not open to students with credit in MGMT 4000.

Prerequisite: ACCT 2102 and junior standing and permission of Honors.

Traditional management, total quality management, just-in-time and constraints management philosophies applied to services and manufacturing. Resource management, the integration of these philosophies, focuses on designing, planning, scheduling, executing, controlling, and measuring operations and their relationships with other functions in providing effective business processes to achieve organizational goals.

Offered on a regular basis.

MGMT 4240. Quality Management. 3 hours.

Prerequisite: MGMT 4000.

Managerial, behavioral, technological, and statistical concepts as related to Total Quality Management (TQM). Quality, continuous improvement and productivity are discussed. Focus is on understanding and being able to apply all the concepts throughout any organization (i.e., service, manufacturing, not-for-profit, and governmental).

Offered on a regular basis.

MGMT 4250. Productivity Management. 3 hours.

Prerequisite: MGMT 4000.

Personal, process, white collar, and organizational productivity concepts, issues, and measurements. Emphasizes combining these new management philosophies in achieving a competitive advantage of time, quality, and price and their impact on organizational profit. Constraint management and process management concepts are applied to support cross-functional problem identification, analysis, solution, and implementation.

Offered on a regular basis.

MGMT 4260. Service Operations Management. 3 hours.

Prerequisite: MGMT 4000.

Service sector performance and methods designed to improve service sector competitiveness. The operations management decisions in service businesses in relation to productivity, quality, work force management, location, capacity, the effect of new technologies, and international issues.

Offered on a regular basis.

MGMT 4270. Applications in Operations Management. 3 hours.

Prerequisite: MGMT 4240 or MGMT 4250 or MGMT 5210 or permission of department.

Analysis of organizational problems using traditional, quality, just-in-time, constraint, and process management tools in service and manufacturing case studies and projects. Constraint management logic-based tools are utilized as a framework to identify the core business problem, develop a solution, and construct an implementation plan.

Offered on a regular basis.

MGMT 4600. Computer Programming in Business. 3 hours.

Prerequisite: MGMT 2090.

Introduction to computer programming. Fundamentals of systems analysis and program development using top-down design; structured programming; and debugging, testing and implementation; elementary data structures.

Offered on a regular basis.

MGMT 4610. Data Management. 3 hours.

Prerequisite: MGMT 2090.

Data management, including database development, access, and administration. The focus is on issues and principles of managing organizational data. Students will get extensive experience in developing data models, creating relational databases, and formulating and executing complex queries.

Offered on a regular basis.

MGMT 4620. Systems Analysis and Design. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Structured systems analysis and design with emphasis on the development of business application systems. Methods of systems documentation are examined through the use of tools and techniques for describing process flows, data flows, data structures, system objects, file designs, input and output designs, and program specifications.

Offered on a regular basis.

MGMT 4800. Internship or Cooperative Education.

1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MGMT 3000 or permission of department.

Students are permitted to enter businesses, governmental agencies, or other organizations for the purposes of obtaining practical and applied managerial

experience. A paper or suitable project associated with a description and analysis of this experience is required.

Non-Traditional Format: Internship.

Offered on a regular basis.

MGMT 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the major field.

Non-Traditional Format: Honors thesis.

Offered on a regular basis.

MGMT 5000. Special Topics in Management. 3 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Individual study, readings, or projects under the direction of a faculty member in Management or Management Information Systems.

Non-Traditional Format: Directed study.

Offered on a regular basis.

MGMT 5210. Materials Management. 3 hours.

Prerequisite: MGMT 4000.

The management of dependent and independent demand inventory items within a manufacturing environment and the examination of the management of finished goods items within a distribution environment. Emphasis is placed on a systems perspective.

Offered on a regular basis.

MGMT 5220. Project Management. 3 hours.

Prerequisite: MGMT 4000.

The planning, scheduling, organizing, implementing and controlling of single and multiple projects. Project management is an increasing area of concern and requires significantly different approaches to these traditional activities. This course explores traditional and new techniques for this dynamic environment.

Offered on a regular basis.

MGMT 5230. Purchasing Management. 3 hours.

Prerequisite: MGMT 4000.

The purchasing function and related functions (traffic receiving, and surplus material). The relationships among price, quality, and delivery service are illustrated. Japanese purchasing philosophy is contrasted to the United States philosophy in conjunction with techniques of negotiation, sourcing, value analysis and engineering.

Offered on a regular basis.

MGMT 5400. Strategic Management. 3 hours.

Not open to students with credit in MGMT 5400H.

Prerequisite: (MGMT 3000 and MARK 3000 and FINA 3000) or permission of department.

The processes by which managers formulate and implement corporate and business strategies in order to achieve the economic and non-economic objectives of their organizations. The course will integrate the students' knowledge of the basic functional disciplines into a general strategic perspective for managing the whole organization.

Offered on a regular basis.

MGMT 5400H. Strategic Management (Honors). 3 hours.

Not open to students with credit in MGMT 5400.
Prerequisite: (MGMT 3000 and MARK 3000 and FINA 000) or permission of Honors.

The strategic management processes by which managers formulate and implement corporate and business strategies in order to achieve the economic and non-economic objectives of their organizations. The course will integrate the students' knowledge of the basic functional disciplines into a general strategic perspective for managing the organization as a whole.

Offered on a regular basis.

MGMT 5420. Business, Society, and Stakeholder Management. 3 hours.

Prerequisite: MGMT 3000.

Explores all aspects of the business and society relationship, including a study of corporate social performance. Focuses on businesses' interactions with key stakeholders, including governments, community, consumers, employees, and the natural environment. Examines corporate public policy from a strategic management perspective.

Offered on a regular basis.

MGMT 5440. Business Ethics. 3 hours.

Prerequisite: MGMT 3000.

Designed to help students deal with the ethical implications of an increasingly complex business world. Covers methods for analyzing and applying personal values, recognizing organizational and environmental forces that influence ethical behavior, and heightening the student's abilities to recognize ethical issues and engage in effective moral debate in a business setting.

Offered on a regular basis.

MGMT 5500. Entrepreneurship and New Venture Formation. 3 hours.

Prerequisite: (MGMT 3000 and MARK 3000 and FINA 000) or permission of department.

The contributions that new ventures and small businesses make to the economy and society as a whole, the characteristics of successful entrepreneurs, the process of starting up new businesses, and the primary determinants of new venture performance. The primary course activity involves the preparation of a Business Plan for a "prospective" new venture.

Offered on a regular basis.

MGMT 5530. Small Business Management. 3 hours.

Prerequisite: MGMT 3000.

The special challenges facing small businesses in today's society. Integrates from a general management perspective the functional knowledge gained in the areas of finance, economics, human resource management, marketing, and operations in order to help prepare the student to manage such businesses.

Offered on a regular basis.

MGMT 5560. International Strategic Management. 3 hours.

Prerequisite: MGMT 3000.

The major problems that confront managers who operate across international boundaries from a base in a single country or who maintain affiliates and subsidiaries in several national jurisdictions. Major emphasis is given to the problems involved in crossing national boundaries.

Offered on a regular basis.

MGMT 5580. Strategic Management of Nonprofit Organizations. 3 hours.

Prerequisite: MGMT 3000.

Strategic management of nonprofit organizations, from the entrepreneurship of start-up ventures to the evolving missions of established nonprofits. Specific attention is given to board roles, resource development, and fundraising, as well as to the history and legal basis of the nonprofit sector.

Offered on a regular basis.

MGMT 5600. Special Topics in Management Information Systems. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MGMT 4600 and MGMT 4610.

The management information systems field evolves rapidly and covers many topic areas. Recent developments in areas such as office automation, data communications, and the implementation of management information systems.

Offered on a regular basis.

MGMT 5620. Building Decision Support Systems. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Decision support systems are the highest level of information support systems which aid the manager in the decision-making process. This course provides the student with the skills necessary to conceptualize, build, and implement decision support systems in organizations.

Offered on a regular basis.

MGMT 5630. Building Knowledge-Based Systems. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Provides the student with knowledge engineering skills required to elicit and represent human knowledge, and to build, implement, and maintain knowledge-based systems in organizations.

Offered on a regular basis.

MGMT 5640. Business Telecommunications and Networking. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Telecommunications concepts, communications architectures and protocols, commercial offerings, equipment, software, network design, and network management.

Offered on a regular basis.

Management

MGMT 5660. Rapid Application Development. 3 hours.

Prerequisite: MGMT 4620.

The use of rapid application development (RAD), prototyping, and end user development. Students use appropriate software tools to quickly build applications.

Offered on a regular basis.

MGMT 5670. Managing the Information System Resource. 3 hours.

Prerequisite: MGMT 4620.

The issues and management techniques involved in administering the Information System/Resource activities in an organization. The focus is on computer-based resources and IS development activities. Management of IS professionals, development and management of project teams, user-professional relationships, emerging technologies, and planning processes. A sociotechnical perspective is emphasized.

Offered on a regular basis.

MGMT 5680. Building Executive Support Systems. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Executive Information Systems (EIS) provide support to executives who have special information requirements to perform their job responsibilities. Organizational and technical concepts, development approaches, technologies, applications, and impacts are discussed. Hands-on experience is provided with several state-of-the-art EIS.

Offered on a regular basis.

MGMT 5700. Using Business Application Software. 3 hours.

Not open to students with credit in MGMT 5710.

Prerequisite: MGMT 2090 and permission of department.

Using a variety of types of business application software to enable the student to be personally productive in the workplace by being able to gather data, analyze it, and present it to others. Popular software suites are covered, as is the use of Internet software. (Cannot be taken for credit by MIS majors.)

Offered on a regular basis.

MGMT 5710. Advanced Business Application Software. 3 hours.

Not open to students with credit in MGMT 5700.

Prerequisite: MGMT 4600 and MGMT 4610.

A variety of types of business application software that enable the student to be personally productive in the workplace by being able to gather data, analyze it, and present it to others. Students are expected to use programming and database skills to carry out these activities.

Offered on a regular basis.

MGMT 5720. Collaborative Work Systems. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

People work in groups on common tasks. Collaborative computing, in particular, group support systems (GSS) provides support to groups of people. Organizational and technical concepts, development approaches, technologies, applications, and impacts are discussed. Hands-on experience is provided with several state-of-the-art GSS.

Offered on a regular basis.

MGMT 5770. Advanced Software Development in Business. 3 hours.

Prerequisite: MGMT 4600 and MGMT 4610.

Multi-user operating systems and a leading personal computer programming language are used to create advanced software applications. The use of computers in networks are emphasized.

Offered on a regular basis.

MGMT 5820. Human Resource Management. 3 hours.

Prerequisite: MGMT 3000.

An introduction to human resource management. Human resource planning, staffing, training and development, compensation, safety and health, and labor relations.

Offered on a regular basis.

MGMT 5860. Compensation and Performance Management. 3 hours.

Prerequisite: MGMT 3000 or permission of department.

The internal and external determinants of compensation within an organization. Job evaluation, pay structure, employee benefits, and the measurement of employee performance. The total compensation package, including monetary and nonmonetary rewards, will be analyzed, as will problems encountered in managing the compensation system.

Offered on a regular basis.

MGMT 5920. Organizational Behavior. 3 hours.

Prerequisite: MGMT 3000.

The interpersonal skills that promote individual, group and organizational effectiveness. Basic concepts, theories, and practices needed to understand human behavior within work organizations. The class activities are varied and interactive, including experiential exercises, discussions, case analyses, and collaborative learning.

Offered on a regular basis.

MGMT 5970. Organizational Change and Innovation Management. 3 hours.

Prerequisite: MGMT 3000.

Key concepts and theories in organizational change and development. The focus is on the student's development of diagnostic skills necessary for the identification of organizational problems and opportunities and the effective management of organizational change.

Offered on a regular basis.

MGMT 5980. Leadership. 3 hours.

Prerequisite: MGMT3000.

This course focuses on managerial leadership. A broad survey of theory, research, and practice on leadership in formal organizations. The topic of leadership effectiveness is at the core of this class. Case analyses, experiential exercises, and discussions are used to develop the personal and interpersonal skills needed in leadership roles.

Offered on a regular basis.

(MIBO) Microbiology

College of Arts and Sciences, Department of Microbiology

MIBO 2500-2500L. Microbiology and Health Care.

4 hours. Three lectures and one 2-hour lab period.

Prerequisite: (BIOL 1104-1104L and PHYS 1112-1112L) or (CHEM 1110 and CHEM 1110L).

Infectious diseases emphasizing the nature of the organisms, the interrelationship of microorganisms and human hosts, the prevention and control of infectious diseases, and a description of the important infectious diseases of humans.

Offered spring and summer semesters.

MIBO 3500. Introductory Microbiology. 3 hours.

Prerequisite: BIOL 1108-1108L and CHEM 2211 and CHEM 2211L and BCMB(BIOL)(CHEM)3100.

Microorganisms, with special emphasis on bacteria, their structure, function, diversity, and importance to man.

Offered fall, spring, and summer semesters.

MIBO 3510L. Introductory Microbiology Laboratory.

2 hours. One lecture and two 2-hour lab periods. Prerequisite: BIOL 1108-1108L and CHEM 2211 and CHEM 2211L and MIBO 3500 and BCMB (BIOL)(CHEM)3100.

General laboratory techniques in experimental microbiology with emphasis on microscopic, morphological, and biochemical analysis.

Offered fall, spring, and summer semesters.

MIBO 3900. Directed Study. 3 hours.

Prerequisite: MIBO 4090/6090 or permission of department.

Independent research in the primary literature in selected areas of microbiology.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

MIBO 4010/6010. Critical Review of Research in Microbiology. 2 hours. Repeatable for maximum 6 hours credit.

Prerequisite: [BCMB(BIOL)(CHEM)3100 and GENE (BIOL) 3204] or [MIBO 3500 and permission of department].

Corequisite: MIBO 3900 or MIBO 4900L or MIBO 4960H or MIBO 4970H or MIBO 4980H or MIBO 4990H.

Critical analysis and discussion of recent advances in microbiology research through oral presentation. Specific topics may vary but will emphasize molecular biology, physiology, and ecology of prokaryotes.

Offered fall, spring, and summer semesters.

(MIBO)FDST 4030/6030-4030L/6030L. Food Microbiology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Interactions of microorganisms with food and the implications of these interactions for food preservation, safety, and fermentations. Pathogenic microorganisms associated with food. Analysis of foods for the presence of microorganisms.

Offered fall semester.

MIBO 4090/6090. Prokaryotic Biology. 3 hours.

Prerequisite: MIBO 3500.

Ultrastructure, physiology, genetics, ecology, and phylogeny of bacteria and archaea.

Offered spring semester.

(MIBO)CBIO 4100/6100. Immunology. 3 hours.

Prerequisite: BCMB(BIOL)(CHEM)3100 and GENE (BIOL) 3204.

Immunology from an experimental perspective. Anatomy, development, and function of the immune system. Immune system in infectious diseases. Mechanisms and pathogenesis of immunological disorders. Evolution of immunological concepts.

Offered fall semester.

(MIBO)FDST 4120/6120-4120L/6120L. Food Fermentations. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500.

Microbial and technical aspects of dairy, vegetable, meat, grain, and fruit fermentations. Products studied include cheese, sausage, beer, wine, and soy sauce.

Offered spring semester.

MIBO 4220/6220. Pathogenic Bacteriology. 3 hours.

Prerequisite: MIBO 3500.

Molecular basis of bacterial virulence: identification of virulence factors, genetic regulation of virulence, and the complex interactions between bacterial pathogens and their hosts.

Offered fall semester.

MIBO 4300/6300. Environmental Microbiology and Biotechnology. 3 hours.

Prerequisite: MIBO 3500.

Microorganisms used in biotechnology, agriculture, bioremediation, and industry; distribution, taxonomy, and physiology of environmentally significant microorganisms.

Offered spring semester.

Microbiology

(MIBO)FDST(EHSC) 4310/6310-4310L/6310L. Environmental Microbiology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems.

Offered fall semester.

(MIBO)FDST(EHSC) 4320/6320-4320L/6320L. Microbiology of Food Sanitation. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: MIBO 3500.

Microorganisms and practices important in food industry sanitation and safety; microorganisms involved and control measures taken to prevent food borne illness, with emphasis on food process operations.

Offered spring semester.

MIBO 4400L/6400L. Experimental Pathogenic Bacteriology. 3 hours. One lecture and two 2-hour lab periods.

Prerequisite: MIBO 4220/6220 and GENE(BIOL) 3204 and BCMB(BIOL)(CHEM) 3100.

Bacterial virulence factors and dynamic interactions between bacteria and their hosts.

Offered spring semester.

MIBO 4600L/6600L. Microbial Physiology Laboratory. 3 hours. Two 3-hour lab periods.

Prerequisite: MIBO 3510L or permission of department. Experimental design, execution, and interpretation as applied to microbial growth, metabolism, and diversity.

Offered spring semester.

(MIBO)CRSS 4610/6610-4610L/6610L. Soil Microbiology. 3 hours. One lecture and two 2-hour lab periods.

Microorganisms in soil and their effect on nutrient recycling, especially as it relates to environmental quality and crop production.

Offered every year on a regular basis.

(MIBO)MARS 4620/6620-4620L/6620L. Microbial Ecology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: MIBO 3500 or permission of department. Emphasizes the roles of microorganisms in ecosystems. Nutrient cycles, methods of microbial analysis, and the functional roles of microorganisms.

Offered spring semester of even-numbered years.

MIBO 4700/6700-4700L/6700L. Medical Mycology. 4 hours. Two lectures and two 2-hour lab periods.

Prerequisite: MIBO 3500.

The yeasts, molds, and actinomycetes most likely to be encountered by a medical mycologist in a diagnostic

laboratory, with special emphasis on the organism which are pathogenic for man and other animals.

Offered fall semester.

MIBO 4800L/6800L. Microbial Genetics Laboratory. 3 hours. Three 2-hour lab periods.

Prerequisite: (MIBO 3510L and GENE(BIOL) 3204) or permission of department.

Genetic analysis of bacteria, with emphasis on isolating mutants and mapping, characterizing, and cloning genes.

Offered fall semester.

MIBO 4900L. Directed Research. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: MIBO 4090/6090 or permission of department.

Independent laboratory research in microbiology under the direction of a faculty member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MIBO 4960H. Honors Research. 3 hours. Three 3-hour lab periods.

Prerequisite: MIBO 4090/6090 and permission of Honors.

Independent laboratory research for students in microbiology, under the direction of a faculty member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MIBO 4970H. Honors Research. 3 hours. Three 3-hour lab periods.

Prerequisite: MIBO 4960H and permission of Honors. Independent laboratory research for students in microbiology, under the direction of a faculty member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MIBO 4980H. Honors Research. 3 hours. Three 3-hour lab periods.

Prerequisite: MIBO 4970H and permission of Honors. Independent laboratory research for students in Microbiology, under the direction of a faculty member.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MIBO 4990H. Honors Thesis. 3 hours. Three 3-hour lab periods.

Prerequisite: MIBO 4090/6090 and MIBO 4960H and permission of Honors.

Preparation of Honors thesis in microbiology under the direction of a faculty member. The final course in Honors research.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered fall, spring, and summer semesters.

MILS) Military Science

Division of the Armed Services, Department of Military Science

MILS 1010. Introduction to the Army I. 2 hours.

The study of the organization, constitutional basis, and interrelationships of the United States Army, Army Reserves, and National Guard. An introduction of United States military weapon systems, task force organization, and the conduct of military operations. Familiarization of basic military skills such as first aid, drill and ceremonies, and radio communications.
Offered fall semester.

MILS 1020. Introduction to the Army II. 2 hours.

The further study of basic military skills with special emphasis on basic rifle marksmanship and small unit tactics. Introduction to threat-nation weapons systems, equipment, and organizations. Analysis of recent or ongoing military operations worldwide.
Offered spring semester.

MILS 2010. Advanced Military Skills I. 2 hours.

Advanced first aid skills and an introduction to the art of basic map reading and land navigation including the study of topographic maps, terrain evaluation and the use of a lensatic compass. Students will also receive preliminary instruction on orienteering and associated skills.
Offered fall semester.

MILS 2020. Advanced Military Skills II. 2 hours.

Small unit tactics, operations, and troop leading procedures to include the combined arms teams to the platoon with primary emphasis on the rifle squad; a study of military leadership and leadership assessment, with an emphasis on the role of officers and non-commissioned officers in the United States Army.
Offered spring semester.

MILS 3010. Applied Leadership and Management I. 3 hours. Three lectures and two 1-hour lab periods.

Prerequisite: MILS 1010 and MILS 1020 and MILS 2010 and MILS 2020 and permission of department. Psychological, physiological, and sociological factors which affect human behavior. Analysis of leadership and management processes. Techniques in planning, presenting, and evaluating performance instruction, to include practical application.
Offered fall semester.

MILS 3020. Applied Leadership and Management II. 3 hours. Three lectures and two 1-hour lab periods.

Prerequisite: MILS 1010 and MILS 1020 and MILS 2010 and MILS 2020 and permission of department. Tactics applied at the platoon and company level to include a study of the modern battlefield and current military tactical doctrine. Planning, directing, and coordinating the efforts of individuals and small units in the execution of offensive and defensive tactical missions.
Offered spring semester.

MILS 4010. Seminar in Leadership and Management I. 3 hours. Three lectures and two 1-hour lab periods.

Prerequisite: MILS 3010 and MILS 3020 and permission of department. Analysis of selected leadership and management problems. Responsibilities of the commander and staff in areas of personnel, intelligence, operations, logistics, and administration of military law. Also a study of the inter-relationships of the military team.
Offered fall semester.

MILS 4020. Seminar in Leadership and Management II. 3 hours. Three lectures and two 1-hour lab periods.

Prerequisite: MILS 3010 and MILS 3020 and permission of department. Practical applications of duties and responsibilities of United States Army second lieutenants, with an emphasis on ethics and personnel actions. Analysis of military principles and doctrine by studying an actual battle and conducting a battle staff ride.
Offered spring semester.

MILS 5010. Directed Studies in Military Science I. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: MILS 4010 and MILS 4020 and permission of department. Special projects designed to develop skills beyond those taught in the standard ROTC program.
Offered fall semester.

MILS 5020. Directed Studies in Military Science II. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: MILS 4010 and MILS 4020 and permission of department. Special projects designed to develop skills beyond those taught in the standard ROTC program.
Offered spring semester.

(MMIB) Medical Microbiology

College of Veterinary Medicine, Department of Medical Microbiology

MMIB 4100/6100-4100L/6100L. Medical Immunology. 3 hours. Three lectures and one 3-hour lab period.

Not open to students with credit in CBIO(MIBO) 4100/6100.
Prerequisite: MIBO 3500 and BCMB (BIOL) (CHEM) 3100.

The mechanism of the immune response, host resistance to infection, serologic testing methods, and in vitro cellular testing procedures.
Offered fall semester.

MMIB 4220/6220. Pathogenic Bacteriology. 3.3 hours.

The morphological, physiological, and pathogenic mechanisms of the important pathogenic bacterial agents; their relation to health and disease.
Offered on a regular basis.

MMIB 4390/6390-4390L/6390L. Clinical Diagnostic Microbiology. 3 hours. Three lectures and two 2-hour lab periods.

Prerequisite: MMIB 4220/6220.

The application of basic diagnostic problems associated with the recovery of disease organisms from clinical material. Methodology and problems involved in laboratory isolation and identification. Methods will also include molecular and automated applications.

Offered spring semester.

MMIB 4450/6450. Molecular Bacteriology. 3 hours.

Not open to students with credit in MIBO 4800L/6800L.

Prerequisite: MIBO 3500.

Techniques involved in identifying bacterial genes and discerning their function. The general principles behind cloning, nucleic acid hybridizations, and PCR. Issues concerning scientific integrity and patent issues.

Offered fall semester.

MMIB 4500/6500-4500L/6500L. Virology. 3 hours.

Three lectures and one 3-hour lab period.

Prerequisite: [MIBO 3500 and BCMB (BIOL) (CHEM) 3100] or permission of department.

The basic principles and concepts of virology. The major emphasis will be on vertebrate viruses. Subjects covered in this course include classification, replication, diagnosis, quantification, pathogenesis, epidemiology, and viral neoplasia.

Offered spring semester.

MMIB 4800/6800. Environmental Epidemiology. 3 hours.

Prerequisite: Permission of department.

The basics of epidemiology, relying on the Principles of Epidemiology Homestudy Manual from the Centers for Disease Control and Prevention. Utilizing this manual and lecture material, the students will understand how to incorporate epidemiologic tools into handling environmental health related concerns; topical infectious diseases.

Offered spring semester.

(MSIT) Management Sciences and Information Technology

Terry College of Business, Department of Insurance, Legal Studies, Real Estate and Management Science

MSIT 3000. Statistical Analysis for Business I. 3 hours.

Not open to students with credit in STAT 4210 or MSIT 3000H.

Prerequisite: MATH 2200 and MATH 2200L and MGMT 2090 and MGMT 2090L.

Application of statistics to business. Descriptive statistics, sampling procedures, random variables, sampling distributions of the means and proportions, estimation and inference, simple linear regression, an introduction to multiple regression, and categorical data models are emphasized. A current statistical software package for microcomputers is utilized to analyze business data.

Offered on a regular basis.

MSIT 3000H. Statistical Analysis for Business (Honors). 3 hours.

Not open to students with credit in STAT 4210 or MSIT 3000.

Prerequisite: MATH 2200 and MATH 2200L and MGMT 2090 and MGMT 2090L and permission of Honors.

Application of statistics to business. Descriptive statistics, sampling procedures, random variables, sampling distributions of the means and proportions, estimation and inference, simple linear regression, an introduction to multiple regression, and categorical data models are emphasized. A current statistical software package for microcomputers is utilized to analyze business data.

Offered on a regular basis.

MSIT 4130. Statistical Analysis for Business II. 3 hours.

Prerequisite: MSIT 3000.

Application of statistics to business. Inference and estimation of parameters from two populations. Multiple regression, forecasting and time series and analysis of categorical data. A current statistical software package for microcomputers is utilized to analyze business data.

Offered on a regular basis.

MSIT 4900H. Internet Connectivity and the Corporate Computer Resource (Honors). 3 hours.

Prerequisite: Permission of Honors.

Large-corporation computing resource model consisting of a mission critical mainframe or supercomputing core, Sun-type workstations for the technical staff, networks of PCs and Macs, and Internet usage across the rest of the organization. Hands-on usage of prominent software packages at each level and the sharing of files across platforms.

Offered on a regular basis.

MSIT 5130. Spreadsheets as a Management Science Tool. 3 hours.

Prerequisite: MSIT 3000.

The formulation and application of management science models, and their implementation via spreadsheets, to problems in business. Linear, integer and nonlinear optimization models; network flow, and multicriteria models; waiting line, inventory and other stochastic models; simulation analysis.

Offered on a regular basis.

MSIT 5470. Artificial Intelligence in Business. 3 hours.

Prerequisite: MSIT 5130.

Role of artificial intelligence and expert systems in business. Emphasis is on artificial intelligence and on the design, testing, validation, and use of expert systems. Computer-based projects and the study of existing systems will be employed to reinforce concepts.

Offered on a regular basis.

MSIT 5990. Directed Study in Management Science. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Field study projects or individually investigated specialized areas in management science under faculty direction.

Non-Traditional Format: Individually directed research projects outside of traditional classroom environment.

Offered on a regular basis.

(MUSI) Music

College of Arts and Sciences, School of Music

MUSI 1100. Music Theory I. 3 hours.

Prerequisite: Permission of department.

Corequisite: MUSI 1110.

Music fundamentals and the beginning of diatonic harmony, part-writing, and analysis. Includes survey of music literature involving European, World, and American traditions.

Offered fall semester.

MUSI 1110. Aural Skills I. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: MUSI 1100.

Fundamentals of ear training involving aural perception of materials of Music Theory I. Laboratory in aural skills drill and keyboard harmony included.

Offered fall semester.

MUSI 1120. Music Theory II. 3 hours.

Prerequisite: MUSI 1100 and MUSI 1110.

A continuation of the material of Music Theory I through more complex diatonic part-writing and analysis through beginning chromatic harmony and analysis. Keyboard harmony work is included.

Offered spring semester.

MUSI 1130. Aural Skills II. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: MUSI 1100 and MUSI 1110.

Ear training involving diatonic and beginning chromatic materials.

Offered spring semester.

MUSI 1810. Applied Music Instruction. 1-3 hours.

Prerequisite: Permission of department.

Applied instruction in a musical instrument or voice for the first semester of the freshman year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 1820. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 1810 or permission of department.

Applied instruction in a musical instrument or voice for the second semester of the freshman year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 2020. Introduction to Music. 3 hours.

The art of music listening involving study of the evolution of a wide range of musical styles from both western and non-western traditions. The course's approach is substantially chronological with elements of music also being covered.

Offered fall and summer semesters.

MUSI 2040. History of Popular Music. 3 hours.

Repeatable for maximum 6 hours credit.

Rotating subjects in popular music, drawing upon a wide variety of influences and ethnicities. Course content will be drawn from such topics as jazz, hispanic styles and influences, folksong, and American musical theatre.

Offered spring semester.

MUSI 2060. History of Rock and Roll. 3 hours.

Rock and roll music from its origins to the present. The sociology and origins from African American Blues to present styles and the role of Georgia and Athens in the current music scene.

Offered fall and summer semesters.

MUSI 2080. African American Music. 3 hours.

African American music and musical influences involving serious and popular styles and approaches. Jazz and blues influences, slave traditions, and early vaudeville and other music for the stage, sacred and secular vocal/choral traditions ranging from European influences to concert spirituals.

Offered spring semester of even-numbered years.

MUSI 2100. Music Theory III. 3 hours.

Prerequisite: MUSI 1120 and MUSI 1130.

Chromatic harmony involving part-writing, composition, and analysis.

Offered fall semester.

Music

MUSI 2110. Aural Skills III. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: MUSI 1130 or permission of department.

Corequisite: MUSI 2100.

Ear training involving chromatic melodic and harmonic materials.

Offered fall semester.

MUSI 2120. Music Theory IV. 3 hours.

Prerequisite: (MUSI 2100 and MUSI 2110) or permission of department.

Advanced chromatic harmony and contemporary compositional methods and materials.

Offered spring semester.

MUSI 2130. Aural Skills IV. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: (MUSI 2100 and MUSI 2110) or permission of department.

Ear training involving advanced chromatic harmony and contemporary materials.

Offered spring semester.

MUSI 2200H. History and Analysis of Music (Honors). 3 hours.

Not open to students with credit in MUSI 2020.

Prerequisite: Permission of Honors.

Elements of music and the broad evolution of musical styles from both western and non-western traditions. After learning a basic vocabulary and surveying major periods in music history, students will explore individual musical topics and participate in class discussions on the creation, performance, and reception of music.

Offered fall and spring semesters.

MUSI 2400. Voice Class I. 1 hour.

Prerequisite: Permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered fall semester.

MUSI 2410. Voice Class II. 1 hour.

Prerequisite: MUSI 2400 or permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered spring semester.

MUSI 2420. Voice Class III. 1 hour.

Prerequisite: MUSI 2410 or permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered fall semester.

MUSI 2430. Voice Class IV. 1 hour.

Prerequisite: MUSI 2420 or permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered spring semester.

MUSI 2440. Voice Class V. 1 hour.

Prerequisite: MUSI 2430 or permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered fall semester.

MUSI 2450. Voice Class VI. 1 hour.

Prerequisite: MUSI 2440 or permission of department.

Basic principles and methods of vocal performance and pedagogy.

Offered spring semester.

MUSI 2460. Voice Class for the Non-Music Major

1 hour. Repeatable for maximum 2 hours credit.

Basic principles and methods of vocal performance and pedagogy for the non-music major.

Offered fall and spring semesters.

MUSI 2500. Piano Class I. 1 hour.

Prerequisite: Permission of department.

Functional keyboard skills for satisfying the piano proficiency requirement.

Offered fall semester.

MUSI 2510. Piano Class II. 1 hour.

Prerequisite: MUSI 2500 or permission of department.

Functional keyboard skills for satisfying the piano proficiency requirement.

Offered spring semester.

MUSI 2520. Piano Class III. 1 hour.

Prerequisite: MUSI 2510 or permission of department.

Functional keyboard skills for satisfying the piano proficiency requirement.

Offered fall semester.

MUSI 2530. Piano Class IV. 1 hour.

Prerequisite: MUSI 2520 or permission of department.

Functional keyboard skills for satisfying the piano proficiency requirement. The exam for this semester is the piano proficiency.

Offered spring semester.

MUSI 2540. Piano Class V. 1 hour.

Prerequisite: MUSI 2530 or permission of department.

Functional keyboard skills for students who have completed the piano proficiency requirement.

Offered fall semester.

MUSI 2550. Piano Class VI. 1 hour.

Prerequisite: MUSI 2540 or permission of department.

Functional keyboard skills for students who have completed the piano proficiency requirement.

Offered spring semester.

MUSI 2700. Men's Glee Club. 1 hour. Repeatable for

maximum 4 hours credit.

Concentration on choral literature for men's voices from all periods of music history, including sacred, secular, folk, and popular music.

Offered fall and spring semesters.

MUSI 2710. Women's Glee Club. 1 hour. Repeatable for maximum 4 hours credit.

Concentration on choral literature for women's voices from all periods of music history, including sacred, secular, folk, and popular music.

Offered fall and spring semesters.

MUSI 2720. Concert Band. 1 hour. Repeatable for maximum 4 hours credit.

A concert band open to all students who have had previous experience in instrumental music.

Offered fall and spring semesters.

MUSI 2730. African American Choral Ensemble. 1 hour. Repeatable for maximum 4 hours credit.

A choral ensemble performing traditional and contemporary black gospel, spiritual, and popular music, and music by contemporary black composers.

Offered fall and spring semesters.

MUSI 2740. University Symphony Orchestra. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

A course for instrumentalists who can qualify.

Offered fall and spring semesters.

MUSI 2750. University Chorus. 1 hour. Repeatable for maximum 4 hours credit.

Concentration on choral literature for mixed voices from all periods of music history, including sacred, secular, and popular music.

Offered fall and spring semesters.

MUSI 2760. Concert Choir. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Concentration on choral literature for mixed voices from all periods of music history, including sacred, secular, and popular music. Audition is required.

Offered fall and spring semesters.

MUSI 2770. University Band. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Instrumental performance organization open to students who can qualify by audition.

Offered fall and spring semesters.

MUSI 2780. Jazz Bands. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Jazz ensemble with improvisation laboratory. Audition is required.

Offered fall and spring semesters.

MUSI 2800. Contemporary Chamber Ensemble. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Concentration on modern literature for small and large ensembles. Open to students who can qualify by audition.

Offered fall and spring semesters.

MUSI 2810. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 1820 or permission of department.

Applied instruction for music majors in a musical instrument, voice, or composition for the first semester of the sophomore year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 2820. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 2810 or permission of department.

Applied instruction for music majors in a musical instrument, voice, or composition for the second semester of the sophomore year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 2840. Symphonic Wind Ensemble. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.

Mixed woodwind-brass-percussion ensemble for the study and performance of wind chamber compositions with concentration on advanced scores. Professional level experience.

Offered fall and spring semesters.

MUSI(AFAM) 2960. African American Percussive Music: From Africa to the Americas. 3 hours. Repeatable for maximum 6 hours credit.

Traditional and contemporary African American percussion music beginning with its African heritage and tracking its development throughout the Americas, with particular emphasis on the United States. Teaching/learning strategies include in-class performance, demonstrations, audiovisuals, and lectures. No previous music performance background is required.

Offered fall and spring semesters.

MUSI 3020. World Music Survey. 3 hours.

The full spectrum of music traditions in non-western high cultures and non-literate societies and an exploration of their structural and symbolic relations to western music.

Offered spring semester.

MUSI 3050. Music Skills and Fundamentals for Elementary School Teachers. 3 hours.

Prerequisite: Permission of department.

The basic skills and fundamentals of music for the elementary and early childhood classroom teacher.

Offered fall and spring semesters.

Music

MUSI 3110. Music Techniques and Experiences for Children. 3 hours.

Prerequisite: MUSI 2120 or MUSI 2130 or permission of department.

Corequisite: MUSI 3120.

Methods and field experience for music education majors. Course consists of a survey of effective teaching techniques, research in learning, and materials, including use of technology and multicultural materials.

Offered spring semester.

MUSI 3120. Music Literature for Children. 2 hours.

Prerequisite: MUSI 2120 or MUSI 2130 or permission of department.

Music literature available for use in public school at all levels of instruction for band, orchestra, and/or chorus.

Offered spring semester.

MUSI 3130. Choral Techniques and Field Experience. 3 hours.

Prerequisite: MUSI 2120 or MUSI 2130 or permission of department.

Methods and field experience for music education majors with specialization in choral music. Course involves effective teaching techniques, research in teaching/learning, and materials, including technology and multicultural materials.

Offered fall semester.

MUSI 3140. Choral Literature. 2 hours.

Prerequisite: MUSI 2120 or MUSI 2130 or permission of department.

Music literature available for use in public school at all levels of instruction for chorus. This course is for music education majors with choral emphasis.

Offered fall semester.

MUSI 3150. Instrumental Techniques and Field Experience. 3 hours.

Prerequisite: MUSI 3110 and MUSI 3120 and permission of department.

Methods and field experience for instrumental music education majors. Course involves effective teaching techniques, research in teaching/learning, and materials, including technology and multicultural materials.

Offered fall semester.

MUSI 3160. Instrumental Literature. 2 hours.

Prerequisite: MUSI 3110 and MUSI 3120 and permission of department.

Prerequisite or corequisite: MUSI 3150.

Instrumental music literature available for use in public school at all levels of instruction. This course is for music education majors with instrumental emphasis.

Offered fall semester.

MUSI 3190. Composition Lab. 1 hour. Repeatable for maximum 6 hours credit.

Not open to students with credit in MUSI 1810.

Elementary exercises and study of composition for non-

music majors and music majors not majoring in composition.

Offered fall and spring semesters.

MUSI 3210. Music History I. 3 hours.

Prerequisite: MUSI 2120 and MUSI 2130.

History of western music from its beginnings through the middle of the Baroque era.

Offered fall semester.

MUSI 3220. Music History II. 3 hours.

Prerequisite: MUSI 2120 and MUSI 2130.

The history of western music from the middle of the Baroque era to the present day.

Offered spring semester.

MUSI 3240. Instrumentation and Arranging. 1 hour.

Prerequisite: MUSI 2120 and MUSI 2130.

Basic instrumentation for all instruments (including basic vocal types) involving ranges, characteristics, and basic arranging.

Offered fall semester.

MUSI 3400. Guitar Techniques. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Basic principles and methods of guitar performance and pedagogy.

Offered fall and spring semesters.

MUSI 3410. String Instrumental Techniques. 1 hour.

Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Basic principles and methods of string performance and pedagogy.

Offered fall and spring semesters.

MUSI 3420. Woodwind Instrumental Techniques.

1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Basic principles and methods of woodwind performance and pedagogy.

Offered fall and spring semesters.

MUSI 3430. Brass Instrumental Techniques. 1 hour.

Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Basic principles and methods of brass instrument performance and pedagogy.

Offered fall and spring semesters.

MUSI 3440. Percussion Techniques. 1 hour. Repeatable for maximum 2 hours credit.

Prerequisite: Permission of department.

Basic principles and methods of percussion performance and pedagogy.

Offered fall and spring semesters.

MUSI 3450. Vocal Pedagogy. 2 hours.

Prerequisite: Permission of department.

Survey course in the study of vocal pedagogy, taught in conjunction with Vocal Pedagogy.

Offered fall semester.

MUSI 3460. Piano Pedagogy I. 1-2 hours.

Prerequisite: Permission of department.

Piano teaching, surveying elementary methods and materials for teaching beginners.

Offered spring semester of odd-numbered years.

MUSI 3470. Keyboard Musicianship. 1 hour.

Prerequisite: Permission of department.

Functional keyboard skills for satisfying the piano proficiency for piano majors with special focus on sight-reading skills.

Offered fall semester.

MUSI 3480. Introduction to Conducting. 1 hour.

Prerequisite: Permission of department.

Basic principles, techniques, and methods of conducting and interpretation.

Offered fall semester.

MUSI 3490. Choral Conducting. 2 hours.

Prerequisite: MUSI 3480.

Rehearsal, interpretive and conducting techniques, and methods for choral organizations.

Offered spring semester.

MUSI 3500. Band Conducting. 2 hours.

Prerequisite: MUSI 3480.

Rehearsals, interpretive and conducting techniques, and methods for band organizations.

Offered spring semester.

MUSI 3510. Orchestra Conducting. 2 hours.

Prerequisite: MUSI 3480.

Rehearsal, interpretive and conducting techniques, and methods for orchestra.

Offered spring semester.

MUSI 3520. Piano Accompanying. 1 hour.

Prerequisite: MUSI 3470.

Practical experience in chamber music, piano duets, and accompanying.

Offered fall semester.

MUSI 3550. Music Theory for Non-Majors. 3 hours.

Not open to students with credit in MUSI 1100 or MUSI 1110.

The fundamentals of music and their application in composition and analysis.

Offered fall semester.

MUSI 3800. Applied Music Instruction for Music Minors. 1-2 hours. Repeatable for maximum 16 hours credit.

Not open to students with credit in MUSI 3810 or MUSI 3820.

Prerequisite: Permission of department.

Applied instruction for music minors in a musical instrument or voice.

Non-Traditional Format: One-hour or thirty minute weekly lessons in a major or secondary applied instru-

ment, voice, or composition. Credit hours vary according to student ability and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 3810. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 2820.

Applied instruction for music majors in a musical instrument, voice, or composition for the first semester of the junior year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 3820. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 3810.

Applied instruction for music majors in a musical instrument, voice, or composition for the second semester of the junior year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 3910. Junior Recital in Music. 1 hour.

Prerequisite: MUSI 2820 or MUSI 3810.

Corequisite: MUSI 3810 or MUSI 3820.

Required recital for music majors in a musical instrument, voice, or composition.

Offered fall, spring, and summer semesters.

MUSI 4000. Directed Independent Study in Music.

1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent research topics in any field of music directed by a faculty member.

Non-Traditional Format: Directed independent study.

Offered fall, spring, and summer semesters.

MUSI 4050. Music Theory Review. 2 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Visual and aural skills for entering graduate students in need of remediation.

Offered fall and summer semesters.

MUSI 4100/6100. Tonal Theory and Analysis. 2 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Chromatic harmonic analysis and analytical methods

Offered spring semester.

Music

MUSI 4110/6110. Introduction to Counterpoint. 3 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Analysis and composition using sixteenth and eighteenth-century compositional techniques.

Offered on a regular basis.

MUSI 4120/6120. Form and Analysis. 3 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Analysis of form focusing on music from the seventeenth, eighteenth, and nineteenth centuries.

Offered spring semester.

MUSI 4130/6130. Electronic Music Composition I. 3 hours.

Prerequisite: (MUSI 2120 and MUSI 2130) or MUSI 4050.

Electronic music techniques, focusing on classical and MIDI applications.

Offered fall semester.

MUSI 4200/6200. Ancient, Medieval, and Renaissance Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Music from Greek and Roman society to ca. 1600.

Offered fall semester of even-numbered years.

MUSI 4210/6210. Music in the Baroque Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Musical styles and forms from Monteverdi through Bach and Handel.

Offered fall semester of odd-numbered years.

MUSI 4220/6220. Music in the Classic Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Chamber, orchestral, keyboard, and operatic works from the middle and late eighteenth century.

Offered spring semester of odd-numbered years.

MUSI 4230/6230. Music in the Romantic Period. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Emphasis on the development of song, symphony, chamber music, and opera.

Offered spring semester of even-numbered years.

MUSI 4240/6240. Modern Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Modern trends in music from Schoenberg, Stravinsky, Hindemith, and Bartok to the present.

Offered spring semester of odd-numbered years.

MUSI 4250/6250. Women and Music. 3 hours.

Prerequisite: (MUSI 3210 and MUSI 3220) or permission of department.

Roles of women in music, including the history of women musicians in western art music, world cultures,

and popular music; gender studies in music.

Offered spring semester of even-numbered years.

MUSI 4260/6260. Opera Literature. 2 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Representative operas from the Baroque era to the twentieth century.

Offered fall semester of even-numbered years.

MUSI 4270/6270. Non-Western Music. 3 hours.

Prerequisite: MUSI 3210 and MUSI 3220.

Music of non-European cultures, including those of the Far East, Near East, and Africa.

Offered spring semester of odd-numbered years.

MUSI 4280/6280. Instrumental/Vocal/Choral Literature. 2 hours.

Prerequisite: (MUSI 3210 and MUSI 3220) or permission of department.

Solo, sonata, and ensemble music composed for winds, brass, strings, piano and harpsichord, organ or voice, dating from the earliest appropriate period to the present. Offered fall, spring, and summer semesters.

MUSI 4460. Piano Pedagogy II. 1-2 hours.

Prerequisite: MUSI 3460.

Survey of supplementary teaching materials for elementary and intermediate level piano students.

Offered spring semester of even-numbered years.

MUSI 4700. Men's Glee Club. 1 hour. Repeatable for maximum 4 hours credit.

Concentration on choral literature for men's voices from all periods of music history, including sacred, secular, folk, and popular music.

Offered fall and spring semesters.

MUSI 4710. Women's Glee Club. 1 hour. Repeatable for maximum 4 hours credit.

Concentration on choral literature for women's voices from all periods of music history, including sacred, secular, folk, and popular music.

Offered fall and spring semesters.

MUSI 4720. Concert Band. 1 hour. Repeatable for maximum 4 hours credit.

A concert band open to all students who have previous instrumental experience.

Offered fall and spring semesters.

MUSI 4730/6730. African American Choral Ensemble. 1 hour. Repeatable for maximum 4 hours credit.

Performance of traditional and contemporary black gospel, spiritual, and popular music.

Offered fall and spring semesters.

MUSI 4740/6740. University Symphony Orchestra.

1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.

Performance of orchestral literature of various styles and genres.

Offered fall and spring semesters.

MUSI 4750/6750. University Chorus. 1 hour. Repeatable for maximum 8 hours credit.

Performance of choral literature for mixed voices from all periods of music history, including sacred, secular, folk, and popular music.
Offered fall and spring semesters.

MUSI 4760/6760. Concert Choir. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Performance of choral literature for mixed voices from all periods of music history, including sacred, secular, folk, and popular music.
Offered fall and spring semesters.

MUSI 4770. University Band. 1 hour. Repeatable for maximum 4 hours credit.

Prerequisite: Permission of department.
Instrumental group open to students who can qualify.
Offered fall and spring semesters.

MUSI 4780/6780. Jazz Bands. 1 hour. Repeatable for maximum 8 hours credit.

Performance of works in a variety of jazz idioms and styles with emphasis on big band jazz.
Offered fall and spring semesters.

MUSI 4790/6790. Chamber Music Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Chamber music experiences in variable instrumental categories (percussion, clarinet, trombone, etc.)
Offered fall, spring, and summer semesters.

MUSI 4800/6800. Contemporary Chamber Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Performance of modern literature for small and large ensembles.
Offered fall and spring semesters.

MUSI 4810. Applied Music Instruction. 1-3 hours.

Prerequisite: (MUSI 3820 and MUSI 3910) or permission of department.
Applied instruction for music majors in a musical instrument, voice, or composition for the first semester of the senior year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 4820. Applied Music Instruction. 1-3 hours.

Prerequisite: MUSI 4810 or permission of department.
Applied instruction for music majors in a musical instrument, voice, or composition for the second semester of the senior year.

Non-Traditional Format: One-hour weekly lessons in a major or secondary applied instrument, voice, or composition for two and three credit hour students; thirty minute lessons for one credit hour students. Credit hours vary according to degree program and reflect differing performance expectations and literature difficulty.

Offered fall, spring, and summer semesters.

MUSI 4830/6830. Collegium Musicum. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Performance of early music through the Baroque.
Offered fall and spring semesters.

MUSI 4840/6840. Symphonic Wind Ensemble. 1 hour. Repeatable for maximum 8 hours credit.

Prerequisite: Permission of department.
Performance of wind chamber compositions with concentration on advanced scores.
Offered fall and spring semesters.

MUSI 4960H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and senior standing.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

MUSI 4970H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: MUSI 4960H and permission of Honors and senior standing.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

MUSI 4980H. Directed Readings and/or Projects (Honors). 3 hours.

Prerequisite: MUSI 4970H and permission of Honors and senior standing.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

MUSI 4990H. Honors Thesis. 3 hours.

Prerequisite: MUSI 4980H and permission of Honors.
Honors thesis based upon independent research in music or closely related field carried out under the direction of a faculty member.

Non-Traditional Format: Honors thesis.
Offered fall, spring, and summer semesters.

MUSI 5110/7110. Music for Childhood. 3 hours.

Prerequisite: MUSI 3110 and MUSI 3120.
Literature, techniques, and methodologies for teaching

Music

children music in a diverse society; a study of children's musical development.
Offered fall semester.

MUSI 5120/7120. Teaching Music for Early Childhood Teachers. 3 hours.

Prerequisite: MUSI 3050.

Music teaching techniques, methods, and materials for the early childhood teacher. For education majors only.
Offered fall and spring semesters.

MUSI 5130/7130. Early Childhood Musical Development. 3 hours.

Prerequisite: MUSI 3110 and MUSI 3120.

Musical development of children from birth through age eight years emphasizing auditory perception, auditory discrimination, responses of children to music, modes of learning music, and children's acquisition of musical performance skills, and understandings.
Offered fall semester.

MUSI 5140/7140. Computer-Assisted Instruction in Music. 2 hours.

Prerequisite: MUSI 2120 and MUSI 2130.

Programming and testing CAI music lessons.
Offered summer semester.

MUSI 5260/7260. Marching Band Techniques. 2 hours.

Methods and techniques for organizing and training marching bands; planning music, drills, formations, and shows.

Offered spring semester.

MUSI 5270/7270. Advanced Conducting. 2 hours.

Prerequisite: MUSI 3490 or MUSI 3500 or MUSI 3510.

Choral and instrumental conducting methods and techniques with application in laboratory situations.
Offered spring semester.

MUSI 5280/7280. Instrumental Techniques. 1 hour.

Repeatable for maximum 4 hours credit.

Performance techniques and teaching methods for wind, string, and percussion instruments.

Offered summer semester.

MUSI 5290/7290. Jazz Piano Improvisation Class. 2 hours.

Skills and techniques in keyboard jazz playing based upon a knowledge of modern popular harmonic and notational practices.

Offered summer semester.

MUSI 5340/7340. Choral Literature and Performance Practice. 2 hours.

Prerequisite: MUSI 3130 and MUSI 3140.

Choral music, including multicultural materials, suitable for all levels and voices.

Offered fall semester.

MUSI 5350/7350. Instrumental Literature and Performance Practice. 2 hours.

Prerequisite: MUSI 3150 and MUSI 3160.

Instrumental music, including multicultural materials, suitable for all levels of instruction for band, orchestra, and chamber music.

Offered fall semester.

MUSI 5400/7400. Principles of Music Therapy. 2 hours.

Music as human behavior and its uses as therapeutic intervention with various populations.

Offered fall semester.

MUSI 5410/7410. Psychology of Music. 3 hours.

Prerequisite: MUSI 5400/7400.

Acoustical and psychological aspects of music with emphasis upon problems of perception, experimental aesthetics, musical function, measurement and diagnosis of musical ability.

Offered spring semester.

MUSI 5420/7420. Influence of Music on Behavior. 3 hours.

Prerequisite: MUSI 5410/7410.

Physiological effects of music, the relation of music to health, and the place of music in the rehabilitative and rehabilitative process.

Offered spring semester.

MUSI 5430/7430. Clinical Experience. 2 hours.

Prerequisite: MUSI 5400/7400 or MUSI 5420/7420 or MUSI 5440/7440.

Practical application of music therapy in an assigned clinic, along with seminars to analyze effectiveness, in-depth interactions, intervention strategies, and accountability measures.

Offered fall, spring, and summer semesters.

MUSI 5440/7440. Music in Recreation. 2 hours.

Prerequisite: MUSI 2120 or MUSI 2130 or MUSI 2530 or MUSI 3480.

Methods of song leading and accompanying on the autoharp, guitar, and piano.

Offered fall semester.

MUSI 5450/7450. Music for Exceptional Children. 3 hours.

Prerequisite: Junior standing and permission of department.

Trends in special education, characteristics and needs of those classified as exceptional, curriculum development, and intervention strategies. Mainstreamed and self-contained settings will be discussed.

Offered fall and spring semesters.

MUSI 5730/7730. Electronic Music Composition II. 3 hours.

Repeatable for maximum 12 hours credit.

Prerequisite: MUSI 4130/6130.

Electronic music compositional techniques, focusing

on digital sound recording, sampling, and editing. Students will use highly advanced recording and editing software on a high-speed computer.
Offered spring semester.

MUSI 5910. Senior Recital in Music. 1-2 hours.

Prerequisite: MUSI 3820 or MUSI 4810.

Corequisite: MUSI 4810 or MUSI 4820.

Required recital for music majors in a musical instrument, voice, or composition, normally taken during the first or second semester of the senior year.

Non-Traditional Format: Credit varies according to degree program, reflective of difficulty of literature and level of performance expectations.

Offered fall, spring, and summer semesters.

(PATH) Plant Pathology

College of Agricultural and Environmental Sciences, Department of Plant Pathology

PATH(ANTH)(BTNY) 3010. Fungi: Friends and Foes. 3 hours.

Impact of fungi on human affairs. Historical and current uses of fungi by humans as well as the roles of fungi in various ecosystems.

Offered spring semester.

(PATH)CRSS(ENTO) 3500. Turfgrass Pest Management. 3 hours.

Prerequisite: CRSS 2830 or CRSS 3500-3270L.

Identification and control of turfgrass weeds, insects, and diseases. Emphasis will be placed on management strategies that include both chemical and non-chemical approaches to the prevention and control of common turfgrass pests.

Offered every year on a regular basis.

PATH 3530-3530L. Introductory Plant Pathology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Principles and concepts of plant pathology, including disease development, environmental interactions, microbial biology and life cycles, and disease control strategies. Broad concepts rather than diagnosis and control of specific diseases.

Offered fall and spring semesters.

PATH 3830-3830L. Forest Pathology. 2 hours. Two lectures and one 2-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Identification of forest diseases, assessment of their potential impacts, and management strategies.

Offered spring semester.

PATH3910. Plant Pathology Internship. 3 hours.

Practical experience on the application of plant pathological principles and procedures learned outside of a formal classroom setting.

Non-Traditional Format: The student will spend the semester in either a university or industry setting obtaining hands-on experience in plant pathology.
Offered fall, spring, and summer semesters.

PATH 3990. Special Problems in Plant Pathology. 1-3 hours. Repeatable for maximum 6 hours credit.

Research or intensive study in a special area of plant pathology, including forest pathology, mycology, nematology, virology, bacteriology, and host-pathogen interactions.

Non-Traditional Format: The student will spend the semester conducting a special problem under the direction of a faculty member.

Offered fall, spring, and summer semesters.

PATH(BTNY) 4200/6200-4200L/6200L. Introductory Mycology. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Morphology, biology, and taxonomy of fungi. Representatives of all major groups of fungi are considered.

Offered fall semester.

PATH 4280/6280-4280L/6280L. Diagnosis and Management of Plant Diseases. 3 hours. Two lectures and one 3-hour lab period.

Prerequisite: PATH 3530-3530L.

Development of fundamental and practical knowledge for identification and management of plant diseases.

Offered fall semester.

(PEDB) Physical Education Basic

College of Education, Department of Physical Education and Sport Studies

Basic Physical Education courses have designated prefix and number PEDB 1010 to PEDB 1990. A list of scheduled courses is available in the *Schedule of Classes* printed each semester.

PEDB courses are designated as Beginning, Intermediate, or Advanced levels. Prerequisite courses or specific skill requirements are necessary for intermediate and advanced level courses.

PEDB 1900 through 1950 are fitness-oriented courses which consist of both fitness activity and a lecture component within which fitness concepts are presented.

Some courses require payment of an additional fee. This fee may be in the form of a requirement that students purchase specific equipment or supplies, or that students pay a fee to the vendor supplying the facility and/or equipment. Basic Physical Education courses are held in the Ramsey Student Center, The Physical Education Building, outdoor campus facilities, and various off-campus locations. Students must provide their own transportation to off-campus facilities. Students should consult their advisors or the director

of Basic Physical Education regarding prerequisites, fees, and class locations.

Grading in the Basic Physical Education program is denoted as S for Satisfactory, U for Unsatisfactory. Specific criteria for a satisfactory grade is established by each instructor. Under some circumstances an Incomplete, I, can be recorded. **Students must initiate a withdrawal during the withdrawal period in order to receive a grade of W. A grade of U will be recorded for students who do not initiate a withdrawal, never attend, or cease attending class.**

(PEDS) Physical Education and Sport Studies

College of Education, Department of Physical Education and Sport Studies

PEDS 2420-2420L. Physical Education in Early Childhood Education. 2 hours. Two lectures and one 1-hour lab period.

Developmentally appropriate movement skills and activities for use with children in early childhood. Field experiences in local elementary schools included. Offered fall, spring, and summer semesters.

PEDS 2920. Sports Officiating. 1 hour. Repeatable for maximum 3 hours credit. One lecture and one 1-hour lab period.

Competencies necessary for officiating sports, including knowledge of rules and officiating techniques. Not offered on a regular basis.

PEDS 3100. Teaching Methods for Fitness. 2 hours. One lecture and three 1-hour lab periods.

Prerequisite: EXRS 3700. Methods of teaching of health-related fitness. Concepts and directed laboratory experiences will enable the student to assess fitness programs and implement them in a physical education program. Offered spring semester of odd-numbered years.

PEDS 3110. Teaching Methods for Team Activities I. 2 hours. Two 2-hour lab periods.

Teaching methods and strategies, including organization, management, and assessment of skills in soccer, speedball, field hockey, basketball, and team handball. Offered fall semester of even-numbered years.

PEDS 3120. Teaching Methods for Team Activities II. 2 hours. Two 2-hour lab periods.

Teaching methods and strategies, including organization, management, and assessment of skills in softball, flag football, volleyball, and floor hockey. Offered spring semester of odd-numbered years.

PEDS 3210. Teaching Methods for Individual Activities I. 2 hours. Two 2-hour lab periods.

Teaching methods and strategies, including organiza-

tion, management, and assessment of skills in badminton, tennis, and bowling.

Offered fall semester of even-numbered years.

PEDS 3220. Teaching Methods for Individual Activities II. 2 hours. Two 2-hour lab periods.

Teaching methods and strategies, including organization, management, and assessment of skills in golf, tumbling, and track and field.

Offered spring semester of odd-numbered years.

PEDS 3301. Physical Education and Sport Studies Practicum I. 1 hour. One 3-hour lab period.

Individual practical experience within a physical education or sport setting.

Offered fall, spring, and summer semesters.

PEDS 3302. Physical Education and Sport Studies Practicum II. 1 hour. One 3-hour lab period.

Individual practical experience within a physical education or sport setting.

Offered fall, spring, and summer semesters.

PEDS 3303. Physical Education and Sport Studies Practicum III. 1 hour. One 3-hour lab period.

Individual practical experience within a physical education or sport setting.

Offered fall, spring, and summer semesters.

PEDS 3360. Curriculum Design/Administration in Physical Education. 3 hours.

Prerequisite: Permission of department.

Physical education curriculum development (pre-kindergarten through grade 12) and administration of instructional and extracurricular programs.

Offered fall and spring semesters.

PEDS 3400. Sport and the Arts. 2 hours.

Relationship between sport and the arts. Description of how the arts have depicted sports performance throughout history and how sports influence the various art forms today.

Offered fall semester.

PEDS 3410. Ethics in Sport. 2 hours.

Concepts of morality and ethics in a sports context. Development of a code of ethics and its application to decisions made by individuals and organizations in sport.

Offered spring semester.

PEDS 3420. Managing the Legal Aspects of Sport. 3 hours.

Management of the legal principles and problems that directly affect sport.

Offered fall semester.

PEDS 3430. Sports Business Practice. 3 hours.

Business opportunities in sport, including sporting goods manufacturing, retail sporting goods, sport facility and event management, sports marketing and promotions, and sports communication.

Offered fall semester.

PEDS 3440. History of Sport. 3 hours.

The historical forces that have led to the modern development of sport. Investigation of the forces that led to the transition of sport from its premodern to its modern form.

Offered fall semester.

PEDS 3450. Contemporary Issues in Sport. 3 hours.

Contemporary issues that are facing sport and the people who manage or participate in it.

Offered spring semester.

PEDS 3460. Governance in Sport. 1 hour.

Structure, function, and influence that various governing bodies have on the conduct of sport at various levels.

Offered spring semester.

PEDS 3470. Philosophy of Sport. 2 hours.

The philosophical forces that led to the modern development of sport.

Offered spring semester.

PEDS 3500. Administrative Foundations of Coaching. 3 hours.

Role of the coach in dealing with the psychological and administrative issues in coaching.

Offered fall and summer semesters.

PEDS 3720. Foundations of Physical Education. 3 hours.

Historical, philosophical, sociological, and psychological factors which influence the nature, evolution, and maintenance of physical education and sport in the schools.

Offered fall semester.

PEDS 3901. Coaching Principles and Strategies of Golf. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching golf.

Offered spring semester of even-numbered years.

PEDS 3902. Coaching Principles and Strategies of Gymnastics. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching gymnastics.

Offered spring semester of odd-numbered years.

PEDS 3903. Coaching Principles and Strategies of Swimming. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching swimming.

Offered spring semester of even-numbered years.

PEDS 3904. Coaching Principles and Strategies of Tennis. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching tennis.

Offered spring semester of odd-numbered years.

PEDS 3905. Coaching Principles and Strategies of Track. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching track.

Offered fall semester of even-numbered years.

PEDS 3911. Coaching Principles and Strategies of Baseball. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching baseball.

Not offered on a regular basis.

PEDS 3912. Coaching Principles and Strategies of Basketball. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching basketball.

Offered spring semester.

PEDS 3913. Coaching Principles and Strategies of Football. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching football.

Offered fall semester.

PEDS 3914. Coaching Principles and Strategies of Soccer. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching soccer.

Offered spring semester.

PEDS 3915. Coaching Principles and Strategies of Softball. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching softball.

Not offered on a regular basis.

PEDS 3916. Coaching Principles and Strategies of Volleyball. 2 hours. Two lectures and one 2-hour lab period.

Principles, strategies, and methods of coaching volleyball.

Offered spring semester.

PEDS 4000. Directed Study in Physical Education and Sport Studies. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Directed study in physical education and sport studies.

Non-Traditional Format: Directed study

Offered fall, spring, and summer semesters.

PEDS 4300/6300-4300L/6300L. Physical Education for the Elementary School. 3 hours. Two lectures and one 2-hour lab period.

Curriculum, methods, and evaluation strategies for teaching physical activities in kindergarten through 6th grade.

Students will plan lessons and teach groups of

students in elementary school physical education classes.

Offered fall semester.

PEDS 4330/6330-4330L/6330L. Physical Education for the Middle/Secondary School. 3 hours. Two lectures and one 2-hour lab period.

Curriculum, methods, and evaluation strategies for teaching physical activities in grades 7 through 12. Students will plan lessons and teach groups of students in both middle and high school physical education classes.

Offered spring semester of odd-numbered years.

PEDS 4610/6610-4610L/6610L. Adapted Physical Education. 3 hours. Two lectures and one 3-hour lab period.

The nature, behavioral characteristics, and motor limitations of various exceptional populations with methods of preparing meaningful individualized movement experiences in an integrated, segregated, or hospital/home bound setting. Includes planning lessons and teaching individuals in a clinic setting.

Offered fall semester of even-numbered years; offered spring semester of odd-numbered years.

PEDS 4750. Motor Skill Behavior. 3 hours.

Motor development and acquisition of motor skill behavior from birth to advanced age. Combines knowledge of motor development and motor learning in development of efficient teaching methods and strategies.

Offered spring semester of even-numbered years; offered fall semester of odd-numbered years.

PEDS 4820. Social Aspects of Sport. 3 hours.

Influence of social forces and psychological factors affecting an individual's involvement in sport.

Offered fall semester.

PEDS 4900. Professional Socialization in Physical Education. 1 hour.

Social and political dynamics of the teaching profession in physical education. Professional organizations, teacher education, staff development, and institutional organizations will be examined with the benefits and responsibilities of each.

Offered spring semester of even-numbered years.

PEDS 5050/7050. Problems of Teaching in Physical Education. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

Contemporary problems and issues facing the physical education teaching profession.

Non-Traditional Format: Normally a school district contacts a faculty member about being a consultant on some problem being encountered in a school. The faculty member elicits assistance from an individual student to study the problem and provide solutions.

Offered fall, spring, and summer semesters.

PEDS 5140/7140. Current Problems in Physical Education and Sport Studies. 1-3 hours. Repeatable for maximum 3 hours credit.

Seminars on issues and problems in Physical Education and Sport Studies.

Non-Traditional Format: Class may be lecture, a course transmitted by satellite, or a series of speakers on a topic.

Offered fall, spring, and summer semesters.

PEDS 5250/7250. Women and Sport. 3 hours.

Political, social, and cultural factors which have influenced the participation of women in sport and physical activity.

Offered on a regular basis.

PEDS 5460. Student Teaching in Physical Education.

1-12 hours. Repeatable for maximum 12 hours credit.

Full-time teaching experience in the public schools under an experienced cooperating teacher.

Non-Traditional Format: Student is assigned to a supervising teacher in a public school for twelve weeks of a semester. The student prepares units, teaches lessons, and evaluates the learning of the students in the classes. The student is observed by the supervising teacher daily and a faculty member periodically to evaluate the student's performance as a teacher.

Offered fall and spring semesters.

(PGEN) Plant Genetics

College of Agricultural and Environmental Sciences

PGEN 3580-3580L. Principles of Genetics. 3 hours.

Two lectures and one 3-hour lab period.

Prerequisite: (BTNY 1210-1210L and BTNY 1220-1220L) or (BIOL 1103-1103L and BIOL 1104-1104L).

Principles of heredity and variation as related to all organisms. Emphasis on the application of genetic knowledge and on genetic experimentation.

Offered fall and spring semesters.

(PHIL) Philosophy

College of Arts and Sciences, Department of Philosophy

PHIL 1000. Introduction to Philosophy. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in PHIL 1000H.

A critical exploration of such topics as knowledge and belief, God and the problem of evil, freedom and determinism, the right and the good, language and meaning, mind and body, appearance and reality, and man and the world.

Offered fall, spring, and summer semesters.

PHIL 1000H. Introduction to Philosophy (Honors). 3 hours.

Not open to students with credit in PHIL 1000.

Prerequisite: Permission of Honors.

A critical exploration of such topics as knowledge and belief, God and the problem of evil, freedom and determinism, the right and the good, language and meaning, mind and body, appearance and reality, and man and the world.

Offered fall, spring, and summer semesters.

PHIL 1500. Logic and Critical Thinking. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in PHIL 1500H.

The principles and standards for thinking and communicating clearly and effectively. Topics include theories of meaning, uses of language, common causes of confusion and error in thought and argument, and evaluation of arguments.

Offered fall, spring, and summer semesters.

PHIL 1500H. Logic and Critical Thinking (Honors). 3 hours.

Not open to students with credit in PHIL 1500.

Prerequisite: Permission of Honors.

The principles and standards for thinking and communicating clearly and effectively. Topics include theories of meaning, uses of language, common causes of confusion and error in thought and argument, and evaluation of arguments.

Offered every year on a regular basis.

PHIL 2200. Introduction to Ethics. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in PHIL 2200H.

The major philosophical positions concerning right and wrong, ethical values, and moral responsibility. The relevance of moral philosophy to current issues of personal and social ethics.

Offered fall and spring semesters.

PHIL 2200H. Introduction to Ethics (Honors). 3 hours.

Not open to students with credit in PHIL 2200.

Prerequisite: Permission of Honors.

The major philosophical positions concerning right and wrong, ethical values, and moral responsibility. The relevance of moral philosophy to current issues of personal and social ethics.

Offered every year on a regular basis.

PHIL 2400. Philosophy, Science, and Nature. 3 hours. Two lectures and one 1-hour lab period.

The philosophy of science and the philosophy of nature, including such issues as standards governing scientific reasoning and the philosophical implications of contemporary and past scientific theories.

Offered every year on a regular basis.

PHIL 2500. Symbolic Logic. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in PHIL 2500H.

The methods and principles used to distinguish correct from incorrect deductive arguments, with emphasis on contemporary techniques of analysis.

Offered fall, spring, and summer semesters.

PHIL 2500H. Symbolic Logic (Honors). 3 hours.

Not open to students with credit in PHIL 2500.

Prerequisite: Permission of Honors.

The methods and principles used to distinguish correct from incorrect deductive arguments, with emphasis on contemporary techniques of analysis.

Offered fall, spring, and summer semesters.

PHIL 3000. Classics of Ancient Western Philosophy. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

Ancient Greek philosophy focusing particularly on works of Plato and Aristotle.

Offered fall semester.

PHIL 3010. Classics of Modern Western Philosophy. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

Philosophers from the "modern period" of philosophy focusing on those writing in the seventeenth and eighteenth centuries, such as Descartes, Spinoza, Locke, Hume, and Kant.

Offered spring semester.

PHIL 3020. Nineteenth-Century Western Philosophy. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

Works of major nineteenth-century philosophers such as Kant, Hegel, Fichte, Schopenhauer, Mill, Frege, and Nietzsche.

Offered every year on a regular basis.

PHIL 3030. Existentialism. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

European existentialism, as initiated by Kierkegaard and developed in this century by such figures as Sartre, Camus, Marcel, Jaspers, and Buber.

Offered every year on a regular basis.

PHIL 3200. Ethical Theory. 3 hours.

Prerequisite: PHIL 2200.

The nature and justification of fundamental ethical concepts and moral principles.

Offered every year on a regular basis.

PHIL 3210. Feminist Philosophy. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

Philosophical investigation and evaluation of feminist philosophy, examining such approaches as liberal feminism, socialist feminism, radical feminism, ecofeminism, and other feminist approaches.

Offered every year on a regular basis.

Philosophy

PHIL 3600. Metaphysics. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.
Philosophical works that address problems such as: What is substance? What is causality? Is mind distinct from matter? Does God exist?
Offered every year on a regular basis.

PHIL 3610. Theory of Knowledge. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.
Basic problems and issues in the theory of knowledge, such as: What is truth? Can we acquire knowledge independently of experience? How can we justify our beliefs? Are inductive generalizations justified?
Offered every year on a regular basis.

PHIL 4000/6000. Plato. 3 hours.

Prerequisite: PHIL 3000.
The major writings of Plato.
Offered every even-numbered year on a regular basis.

PHIL 4010/6010. Aristotle. 3 hours.

Prerequisite: PHIL 3000.
The major writings of Aristotle.
Offered fall semester; offered spring semester of even-numbered years.

PHIL 4020/6020. Medieval Philosophy. 3 hours.

Prerequisite: PHIL 3000.
The major figures of the medieval period in western philosophy, including Augustine and Aquinas.
Offered every odd-numbered year on a regular basis.

PHIL 4030/6030. Continental Rationalism. 3 hours.

Prerequisite: PHIL 3010.
Continental Rationalism, focusing on evaluating the principal writings of Descartes, Spinoza, and Leibniz.
Offered every even-numbered year on a regular basis.

PHIL 4040/6040. British Empiricism. 3 hours.

Prerequisite: PHIL 3010.
British Empiricism, focusing on evaluating the principal writings of Locke, Berkeley, and Hume.
Offered every odd-numbered year on a regular basis.

PHIL 4050/6050. Kant. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.
The major writings of Immanuel Kant.
Offered every even-numbered year on a regular basis.

PHIL 4060/6060. Hegel. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.
The major writings of G.W.F. Hegel.
Offered on a regular basis.

PHIL 4070/6070. Nineteenth-Century European Philosophy. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3020.
Works of some major nineteenth-century philosophers, typically organized around a theme. Philosophers to be studied may include Mill, Bentham, Frege, Brentano, Schopenhauer, Fichte, Schelling, and Nietzsche.
Offered every even-numbered year on a regular basis.

PHIL 4080/6080. Classical American Philosophy. 3 hours.

Prerequisite: Permission of department.
The major writings of C.S. Pierce, William James, and John Dewey and their influence on the development of contemporary philosophy.
Offered every odd-numbered year on a regular basis.

PHIL 4090/6090. Contemporary Continental Tradition. 3 hours.

Prerequisite: PHIL 3000 or PHIL 3010 or PHIL 3030.
Writings from the early phenomenologists, existentialists, contemporary Marxists and their successors, such as Husserl, Heidegger, Merleau-Ponty, Camus, Sartre, Marcuse, and Habermas.
Offered every odd-numbered year on a regular basis.

PHIL 4100/6100. Contemporary Analytic Tradition. 3 hours.

Prerequisite: PHIL 3010 or PHIL 3600 or PHIL 3610.
The development of contemporary analytical philosophy from the turn of the century to the present. Readings will be from philosophers such as Russell, Moore, Wittgenstein, Carnap, Ryle, Austin, Quine, and Strawson.
Offered every odd-numbered year on a regular basis.

PHIL 4210/6210. Social and Political Philosophy. 3 hours.

Prerequisite: PHIL 2200.
The nature and function of society and the state, human freedom and rights, and the bases of social and political obligations.
Offered every odd-numbered year on a regular basis.

PHIL(EETH) 4220/6220. Environmental Ethics. 3 hours.

Prerequisite: PHIL 2200 or permission of department.
Major professional and nonprofessional writings in the field of environmental ethics.
Offered fall semester.

PHIL 4230/6230. Aesthetics. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.
Philosophical theories about the arts; for example, painting, literature, and music. Questions to be addressed include: what makes art art? and what are appropriate criteria of good art? Attention may also be given to such topics as the function of art in society.
Offered every even-numbered year on a regular basis.

PHIL 4240/6240. Philosophy of Law. 3 hours.

Prerequisite: Permission of department.
The nature and function of law, with emphasis on the interpretation and application of the law in the judicial process. Readings in classical and contemporary schools of the philosophy of law.
Offered every odd-numbered year on a regular basis.

PHIL(EETH) 4250/6250. Technology and Values. 3 hours.

Prerequisite: Permission of department.

Technology in its broadest human context, with emphasis on the mutual influence between means and ends and the impact of technology on shaping the beliefs and attitudes of a civilization. Includes alternative assessments of technology and illustrates with specific crucial issues of our time.

Offered spring semester of even-numbered years.

PHIL(LING) 4300/6300. Philosophy of Language. 3 hours.

Prerequisite: Permission of department.

Topics such as formal and ordinary languages, meaning, reference, truth, definition, analyticity, ambiguity, metaphor, symbolism, and the uses of language.

Offered every even-numbered year on a regular basis.

PHIL 4310/6310. Philosophy of Mind. 3 hours.

Prerequisite: PHIL 3000 or PHIL 3010 or PHIL 3020 or PHIL 3610.

The philosophical implications of alternative approaches to psychology such as the behavioral, the psychoanalytic, the phenomenological, with particular attention to such problematic areas as the nature and validation of psychological concepts, law, and theories, and the knowledge of other minds.

Offered every odd-numbered year on a regular basis.

PHIL 4400/6400. History of Natural Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2400.

Major physical, biological, and cosmological theories and their philosophic import, sixth century B.C. to the present.

Offered every even-numbered year on a regular basis.

PHIL 4410/6410. Philosophy of Natural Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2400.

The logical structure of scientific hypotheses and/or laws, and the problems of their meaning and confirmation; the general patterns of scientific explanation; and the ideals of prediction and control.

Offered every even-numbered year on a regular basis.

PHIL 4420/6420. Philosophy of Social Science. 3 hours.

Prerequisite: PHIL 1000 or PHIL 2200 or PHIL 2400.

The methods and problems of inductive reasoning, including the nature of probable inference, techniques of verification, and the structure of scientific explanation, with special reference to the social sciences.

Offered every odd-numbered year on a regular basis.

(PHIL)RELI 4500/6500. Philosophy of Religion. 3 hours.

Prerequisite: RELI 1003 or PHIL 1000 or PHIL 2200 or PHIL 2400.

The meaning, nature, and validity of religious discourse, beliefs, and practices, involving theories concerning the existence and nature of God and humanity's relation to God.

Not offered on a regular basis.

PHIL(LING) 4510/6510. Deductive Systems. 3 hours.

Prerequisite: PHIL 2500.

Symbolic-mathematical logic, examining the propositional and predicate calculi, with emphasis on problems in translation and formalization and topics in the philosophy of logic and mathematics.

Offered fall semester.

PHIL(LING) 4520/6520. Model Theory. 3 hours.

Prerequisite: PHIL(LING) 4510/6510.

Formal semantics for sentential and first-order predicate logic, including both soundness and completeness results for first-order logic. Additional topics may include Goedel's incompleteness results, the Skolem-Lowenheim theorem, or possible world semantics for modal logics.

Offered spring semester of even-numbered years.

PHIL 4530/6530. Philosophy of Mathematics. 3 hours.

Prerequisite: (PHIL 1000 or PHIL 2400) and PHIL 2500.

The philosophical issues associated with mathematical inquiry, including, perhaps, the existence and nature of mathematical objects, the epistemology of mathematical truths, the character of mathematical proof, and the foundations of mathematics.

Offered spring semester of odd-numbered years.

(PHIL)CSCI 4550/6550. Artificial Intelligence. 3 hours.

Prerequisite: CSCI 1302 or [PHIL 2500 and (PHIL 3010 or PHIL 3020 or PHIL 3610)] or permission of department.

Prerequisite or corequisite: CSCI(ARTI) 4540/6540.

The artificial intelligence approach to modeling cognitive processes. Topics include an introduction to heuristic methods, problem representation and search methods, classic AI techniques, and a review of the controversial issues of the AI paradigm of cognition as computation.

Offered fall semester.

(PHIL)HIST 4860/6860. History, History of Philosophy, Philosophy. 3 hours.

Historians and philosophers differ in the source of evidence and arguments they use and in the standards to which they appeal. Nonetheless, works in each of these fields raise questions relevant to the other field. The purpose of this course is to explore the main relationships between these two fields.

Offered on a regular basis.

PHIL 4900. Problems in Philosophy. 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of department.
Investigation of a philosophical problem or group of related problems with emphasis upon extensive reading in primary sources. Selection of topics will vary with instructor and interests of students.
Offered every year on a regular basis.

PHIL 4950. Directed Readings in Philosophy. 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of department.
Reading and independent research on a specified topic beyond normal course offerings and closely supervised by the tutor. Application should be made in advance of registration to the department head. Open only to students prepared to pursue advanced material.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PHIL 4960H. Directed Reading and/or Projects (Honors). 3 hours. Repeatable for maximum 9 hours credit.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the direction of a project director.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PHIL 4970H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the direction of a project director.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PHIL 4980H. Directed Reading and/or Projects (Honors). 3 hours.
Prerequisite: Permission of Honors.
Individual study, reading, or projects under the direction of a project director.
Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PHIL 4990H. Honors Thesis. 3 hours.
Prerequisite: Permission of Honors.
Individual research in the major field or in a closely related field.
Non-Traditional Format: An independent research course. Each student meets individually with a faculty supervisor on a weekly basis to discuss the progress of his/her research project.
Offered fall, spring, and summer semesters.

(PHYS) Physics

College of Arts and Sciences, Department of Physics

PHYS 1010. Physical Science. 3 hours.
Not open to students with credit in PHYS 1111-1111L or PHYS 1211-1211L.
Elementary knowledge of fundamental laws and concepts in physics and astronomy and the understanding of how the scientific method as exemplified by physical science has contributed to man's thinking.
Offered fall, spring, and summer semesters.

PHYS 1050. Physics of Music and Sound. 3 hours.
Prerequisite: MATH 1090 or MATH 1113.
Wave motion, particularly as applied to sound, will be studied. This knowledge of sound will then be applied to understanding the selected topics in music.
Not offered on a regular basis.

PHYS 1111-1111L. Introductory Physics-Mechanics, Waves, Thermodynamics. 4 hours. Three lectures and one 2-hour lab period.
Prerequisite: MATH 1090 or MATH 1113.
Fundamental laws of mechanics, waves, and thermodynamics.
Offered fall, spring, and summer semesters.

PHYS 1112-1112L. Introductory Physics-Electricity and Magnetism, Optics, Modern Physics. 4 hours. Three lectures and one 2-hour lab period.
Prerequisite: PHYS 1111-1111L.
Fundamental laws of electricity and magnetism, optics, and nuclear physics.
Offered fall, spring, and summer semesters.

PHYS 1211-1211L. Introductory Physics for Science and Engineering Students-Mechanics, Waves, Thermodynamics. 4 hours. Three lectures and one 3-hour lab period.
Not open to students with credit in PHYS 1111-1111L.
Prerequisite or corequisite: MATH 2200, 2200L.
Fundamental laws of mechanics, waves, and thermodynamics.
Offered fall and spring semesters.

PHYS 1212-1212L. Introductory Physics for Science and Engineering Students-Electricity and Magnetism, Optics, Modern Physics. 4 hours. Three lectures and one 3-hour lab period.
Not open to students with credit in PHYS 1112-1112L.
Prerequisite: PHYS 1111-1111L or PHYS 1211-1211L.
Prerequisite or corequisite: MATH 2210, 2210L.
Fundamental laws of electricity and magnetism, optics, and nuclear physics.
Offered fall and spring semesters.

PHYS 1990. Introductory Physics Seminar. 1 hour. Repeatable for maximum 2 hours credit. Topics in physics and astronomy presented by faculty and visitors. Topics will vary from year to year, and several topics will be considered weekly. Offered fall and spring semesters.

PHYS 3320-3320L. Introductory Electronics. 3 hours. Two lectures and one 3-hour lab period. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L) and MATH 2500. Electric circuits and electronics. DC and AC circuit analysis, diode and transistor circuits, integrated circuits, and digital electronics. Offered spring semester.

PHYS 3330-3330L. Modern Optics. 3 hours. Two lectures and one 3-hour lab period. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L) and MATH 2500. The properties of light with emphasis on physical optics: diffraction, polarization, lasers, holography. Offered fall semester.

PHYS 3700. Modern Physics. 3 hours. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L). Prerequisite or corequisite: MATH 2500. Special relativity, the early development of quantum physics, wave mechanics applied to simple systems. Offered spring semester.

PHYS 3900. Mathematical Methods in Physics. 3 hours. Prerequisite: PHYS 1112-1112L or PHYS 1212-1212L. Special topics in mathematics with direct applications to problems in physics. Offered spring semester.

PHYS 3990. Directed Study. 1-3 hours. Repeatable for maximum 3 hours credit. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L) and permission of department. Students have the opportunity for intensive study, with one or more faculty members, of topics not normally taught in other courses. Non-Traditional Format: Outside reading and one-on-one discussion periods. Offered fall and spring semesters.

PHYS 4000/6000. Physics Seminar. 1 hour. Repeatable for maximum 3 hours credit. Discussion of contemporary topics in physics. Offered fall and spring semesters.

PHYS 4101/6101. Theoretical Mechanics I. 3 hours. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L). Prerequisite or corequisite: MATH 2700. Kinematics and dynamics of a particle and of systems of particles. Offered spring semester.

PHYS 4102/6102. Theoretical Mechanics II. 3 hours. Prerequisite: PHYS 4101/6101. Mechanics of continuous media. Formal developments in mechanics including the formulations of Lagrange and Hamilton. Offered fall semester.

PHYS 4201/6201. Electricity and Magnetism I. 3 hours. Prerequisite: PHYS 4101/6101. Experimental foundations, including development of Maxwell's equations. Offered fall semester.

PHYS 4202/6202. Electricity and Magnetism II. 3 hours. Prerequisite: PHYS 4201/6201. Applications of Maxwell's equations. Offered spring semester.

PHYS 4300/6300. Thermodynamics and Kinetic Theory. 3 hours. Prerequisite: (PHYS 1112-1112L or PHYS 1212-1212L) and MATH 2700. The laws of thermodynamics and their application to physical systems. Kinetic theory. Offered spring semester.

PHYS 4650L. Experimental Physics. 3 hours. Two 3-hour lab periods. Prerequisite: PHYS 3320-3320L. Laboratory course in which the student uses modern experimental techniques to investigate phenomena in atomic and molecular, nuclear, and condensed matter physics. Offered spring semester.

PHYS 4701/6701. Introductory Quantum Mechanics I. 3 hours. Prerequisite: PHYS 3700 and PHYS 4101/6101. Fundamental principles of quantum mechanics. Solutions of the Schroedinger equation and their properties for simple systems are discussed. Offered fall semester.

PHYS 4702/6702. Introductory Quantum Mechanics II. 3 hours. Prerequisite: PHYS 4701/6701. Perturbation theory and applications of quantum mechanics. Offered spring semester.

PHYS 4750/6750. Nuclear and Particle Physics. 3 hours. Prerequisite: PHYS 3700. Properties of nuclear and subnuclear systems. Fundamental interactions between particles are treated. An introduction to the theory of the structure of baryons, mesons, and nuclei is presented along with quarks and the standard model. Not offered on a regular basis.

Physics / Political Science

PHYS 4820/6820. Condensed Matter Physics. 3 hours.

Prerequisite: PHYS 3700 and PHYS 4300/6300.

Elastic, thermal, electrical, magnetic and optical properties of condensed matter. Covers such topics as crystal structure, symmetry operators, X-ray and neutron diffraction, lattice vibrations, thermal properties, electrons in metals and semiconductors, dielectric and optical properties, magnetism and magnetic resonance, superconductivity, and quantum fluids.

Not offered on a regular basis.

PHYS 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Meetings with project director.

Offered fall and spring semesters.

PHYS 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Meetings with project director.

Offered fall and spring semesters.

PHYS 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Meetings with thesis advisor.

Offered fall and spring semesters.

(POLS) Political Science

College of Arts and Sciences, Department of Political Science

POLS 1101-1101D. American Government. 3 hours.
2-3 lectures and 0-1 discussion periods of 0-1 hours per week.

Not open to students with credit in POLS 1105H.

Government and politics in the United States, including the philosophical and constitutional foundations, political institutions such as Congress and the presidency, political practices such as voting, and civil rights and liberties.

Offered fall, spring, and summer semesters.

POLS 1105H. American Government (Honors). 3 hours.

Not open to students with credit in POLS 1101-1101D.

Prerequisite: Permission of Honors.

Government and politics in the United States, including the philosophical and constitutional foundations, political institutions such as Congress and the presi-

dency, political practices such as voting, and civil rights and liberties.

Offered every year on a regular basis.

POLS 3000. Introduction to Political Theory. 3 hours.

Prerequisite: POLS 1101-1101D.

Political theory for students with little or no previous course work in the area. Focuses on one or more important political concepts or phenomena (e.g., power, freedom, or political ambition) and as entry-point into various approaches and literatures within the field.

Not offered on a regular basis.

POLS 3100H. Issues in Political Philosophy (Honors). 3 hours.

Prerequisite: POLS 1101-1101D and permission of Honors.

Basic questions in political philosophy, e.g., purposes of government, forms of government, relationships of government and the individual, and the limits of political authority.

Not offered on a regular basis.

POLS 3200. Introduction to International Relations. 3 hours.

Not open to students with credit in POLS 3200H.

Prerequisite: POLS 1101-1101D.

Practices and problems of international politics in a global context, e.g., power, ideology, diplomacy, war, international organization and law, international economics, and the nature of independence in an interdependent world. Course may be taken through UGA Studies Abroad program in Verona.

Not offered on a regular basis.

POLS 3200H. Introduction to International Relations (Honors). 3 hours.

Prerequisite: POLS 1101-1101D and permission of Honors.

Practices and problems of international politics in global context, e.g., power, ideology, diplomacy, war, international organization and law, international economics, and the nature of independence in an interdependent world.

Offered fall and spring semesters.

POLS 3300. Comparative Political Analysis. 3 hours.

Prerequisite: POLS 1101-1101D.

Comparative political themes in political science. The transition from feudalism to capitalism, state building, democracy, and the interaction between political institutions and cultures in various politics. Examples will be drawn from developed, communist/post-communist, and developing political systems. Course may be taken through UGA Studies Abroad program in Oxford, Verona.

Offered fall and spring semesters.

POLS 3350H. Problems of Post-Communism (Honors). 3 hours

Prerequisite: POLS 1101-1101D and permission of Honors.

Selected problems and challenges of domestic and international politics in Russia and other selected post-communist states.
Not offered on a regular basis.

(POLS)(ANTH)SOCI 3450. Sociopolitical Ecology. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The relationship between humans and their environment; ecological and social theories about environmental policies and problems. Course may be taken through UGA Studies Abroad program in GLOBIS.

Offered every year on a regular basis.

POLS 3600. Criminal Justice Administration. 3 hours.

Prerequisite: POLS 1101-1101D.

The actors and agencies in the administration of criminal law in the United States. Surveys processes critical to criminal punishment: arrest, bail, prosecution, conviction, sentencing, and corrections.

Offered every year on a regular basis.

POLS(SOCI) 3700. Research Methods in Criminal Justice. 2-3 hours.

Not open to students with credit in POLS 4150.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS(SOCI) 3700L.

Fundamental principles of social science research and related research design. Structured to develop students' abilities to think clearly, critically, and logically about social science issues through the scientific evaluation of empirical issues and evidence.

Offered every year on a regular basis.

POLS(SOCI) 3700L. Research Methods in Criminal Justice Laboratory. 1 hour. One lecture and one 1-hour lab period.

Not open to students with credit in POLS 4150L.

Corequisite: POLS(SOCI) 3700.

Fundamental principles of social science research and related research design. Structured to develop students' abilities to think clearly, critically, and logically about social science issues through the scientific evaluation of empirical issues and evidence.

Not offered on a regular basis.

POLS 4010. Political Philosophy to Machiavelli. 3 hours.

Prerequisite: POLS 1101-1101D.

Selected works of such writers as Plato, Aristotle, Cicero, St. Augustine, and St. Thomas, concluding with the rejection of classical thought by Machiavelli.

Offered every year on a regular basis.

POLS 4020. Political Philosophy: Hobbes to Nietzsche. 3 hours.

Prerequisite: POLS 1101-1101D.

The development of modern political philosophy through the analysis of selected works of such writers

as Hobbes, Locke, Hume, Rousseau, Mill, Marx, and Nietzsche.

Offered every year on a regular basis.

POLS 4030. Contemporary Political Thought. 3 hours.

Prerequisite: POLS 1101-1101D.

Major issues in contemporary political thought with attention to the theoretical roots of major contemporary ideologies.

Offered every year on a regular basis.

POLS 4040. American Political Thought. 3 hours.

Prerequisite: POLS 1101-1101D.

The ideas about human nature and government that have shaped political practice and debate in America. The principles of the Declaration of Independence and the Constitution, as developed by Jefferson, Madison, and Hamilton, and the interpretation of these principles by such statesmen as Lincoln and Wilson. Other topics include black political thought and current liberal-conservative debates.

Offered every year on a regular basis.

POLS 4050. African American Political Thought. 3 hours.

Prerequisite: POLS 1101-1101D.

African American political thought since the nineteenth century, ranging from early emigrationist sentiments to the nationalist exhortations of contemporary African American youth culture, including African American feminist and socialist thought.

Offered every year on a regular basis.

POLS 4060. Problems in Democratic Theory. 3 hours.

Prerequisite: POLS 1101-1101D.

Major issues in theoretical discussions of democracy, such as the nature of democratic government, its purposes, its justification, its limitations, and the conditions necessary for its maintenance.

Not offered on a regular basis.

POLS 4070. Theories of Political Choice. 3 hours.

Prerequisite: POLS 1101-1101D.

Methods for individual choice in the face of political alternatives. The role of individual decision making in orienting political behavior and determining how and when political actors come into conflict or behave cooperatively.

Offered every year on a regular basis.

POLS 4150. Research Methods in Political Science. 2-3 hours.

Not open to students with credit in POLS(SOCI) 3700.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS 4150L.

The qualitative and quantitative techniques for measurement, analysis, and inference of political data. Recommended for majors, especially those planning to attend graduate school.

Not offered on a regular basis.

Political Science

POLS 4150L. Research Methods in Political Science Laboratory. 1 hour.

Not open to students with credit in POLS(SOCI) 3700L.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS 4150.

The qualitative and quantitative techniques for measurement, analysis, and inference of political data. Recommended for majors, especially those planning to attend graduate school.

Not offered on a regular basis.

POLS 4190. Special Topics in Political Theory/Methods. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: POLS 1101-1101D.

Selected writers, themes, or methodologies in political theory.

Not offered on a regular basis.

(POLS)AFAM 4200. African American Social Change. 3 hours.

Prerequisite: POLS 1101-1101D and AFAM 2000.

African American social movements, principally those in the United States, such as the convention and colonizing movements of the nineteenth century and the Civil Rights and Black Power movements of the twentieth century.

Not offered on a regular basis.

POLS 4210. International Law. 3 hours.

Prerequisite: POLS 1101-1101D.

Legal structures in the international system. Course may be taken through UGA Studies Abroad program in Verona.

Offered every even-numbered year on a regular basis.

POLS 4220. International Conflict. 3 hours.

Prerequisite: POLS 1101-1101D.

The major approaches to the study of international conflict, with special emphasis on the logical and empirical foundations for key hypotheses regarding war and peace. These subjects are addressed by considering the incentives and constraints on decision making that arise from systemic, coalitional, national, and individual factors.

Offered every year on a regular basis.

POLS 4230. Politics of International Economic Relations. 3 hours.

Prerequisite: POLS 1101-1101D.

The political foundations in international economic relations, including foreign investment, international monetary relations, trade issues, and economic sanctions.

Not offered on a regular basis.

POLS 4240. International Organization. 3 hours.

Prerequisite: POLS 1101-1101D.

The role of international institutions in overcoming obstacles to international cooperation, with emphasis on international regimes, formal as well as informal, and

their capacity to induce international cooperation. Course may be taken through UGA Studies Abroad program in Verona.

Offered every year on a regular basis.

POLS 4250. American Foreign Policy. 3 hours.

Prerequisite: POLS 1101-1101D.

The history and content of American foreign policy as well as the foreign policy-making process. The role of individuals and nongovernmental organizations in making foreign policy in a mature democracy. Course may be taken through UGA Studies Abroad program in Verona.

Offered every year on a regular basis.

POLS 4300. United Nations Practicum. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: AFAM(POLS) 4200.

Issues coming before the United Nations organization in the upcoming session from the standpoint of assigned countries, culminating in participation in the national Model United Nations in New York in early spring. Research papers and practicum at United Nations headquarters in New York.

Offered every year on a regular basis.

POLS 4360. Political Development. 3 hours.

Prerequisite: POLS 1101-1101D.

The sociopolitical dynamics of social change involving institutional development, industrialization, and modernization.

Not offered on a regular basis.

POLS 4370/6370. Politics of Industrialized Democracies. 3 hours.

Not open to students with credit in POLS 4370H.

Prerequisite: POLS 1101-1101D.

The political economy, institutions, and cultures of the major capitalist countries in Europe, East Asia, and North America. State-society relations and formal and informal political institutions, such as political parties, interest groups, electoral systems, and democratic representation. Course may be taken through UGA Studies Abroad program in Verona, Oxford.

Offered fall and spring semesters.

POLS 4370H. Politics of Industrialized Democracies (Honors). 3 hours.

Not open to students with credit in POLS 4370/6370.

Prerequisite: POLS 1101-1101D and permission of Honors.

The political economy, institutions, and cultures of the major capitalist countries in Europe, East Asia, and North America. State-society relations and formal and informal political institutions, such as political parties, interest groups, electoral systems, and democratic representation.

Not offered on a regular basis.

POLS 4380. Politics of Post-Communist Systems. 3 hours.

Prerequisite: POLS 1101-1101D.

Domestic and international politics in Russia and other selected post-communist states.
Not offered on a regular basis.

POLS 4390. Far Eastern Political Systems. 3 hours.

Prerequisite: POLS 1101-1101D.

The social, cultural, economic, and political processes in Asia Pacific systems, including Japan, China, and Korea.

Offered every year on a regular basis.

POLS 4480. Special Topics in International Relations. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: POLS 1101-1101D.

Theoretical, analytical, and empirical approaches to international relations. Course may be taken through UGA Studies Abroad program in Verona.

Not offered on a regular basis.

POLS 4490. Special Topics in Comparative Politics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: POLS 1101-1101D.

Theoretical, analytical, and empirical approaches to comparative politics.

Not offered on a regular basis.

POLS 4510. Public Opinion and American Democracy. 2-3 hours.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS 4510L.

Major methods and findings of survey research, with particular attention to attitudes and beliefs and their implications for the role of citizens in a representative democracy.

Not offered on a regular basis.

POLS 4510L. Public Opinion and American Democracy Laboratory. 1 hour. One lecture and one 1-hour lab period.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS 4510.

Major methods and findings of survey research with particular attention to attitudes and beliefs and their implications for the role of citizens in a representative democracy.

Not offered on a regular basis.

POLS 4520/6520. Electoral Behavior. 3 hours.

Prerequisite: POLS 1101-1101D.

Factors which contribute to electoral choice and the dynamics of voting in the American political system.
Offered every year on a regular basis.

POLS 4530. American Political Parties. 3 hours.

Prerequisite: POLS 1101-1101D.

Political organizations that contest elections and seek to control government in the United States. Particular emphasis will be placed on the two major political

parties, as well as the future of the American party system.

Offered every year on a regular basis.

POLS 4540. Interest Group Politics. 3 hours.

Prerequisite: POLS 1101-1101D.

The role of organized groups in the United States political system. Special attention given to interest group formation and maintenance, legislative and executive branch lobbying, and the impact of interest groups on legislative behavior in light of theories of representation.

Not offered on a regular basis.

POLS 4550. Government and the Mass Media. 3 hours.

Prerequisite: POLS 1101-1101D.

The mass media and its relationship to campaigns and elections, the exercise of political leadership, the formation of public policy, and the development of democratic governance.

Not offered on a regular basis.

POLS 4560. African American Politics. 3 hours.

Prerequisite: POLS 1101-1101D.

African American political behavior, including the theoretical underpinnings of political action, the electoral preferences of African Americans, and the role of African Americans in United States political institutions.
Offered every year on a regular basis.

POLS 4570. African American Social Change. 3 hours.

Prerequisite: POLS 1101-1101D.

African American social movements, principally those in the United States, such as the convention and colonizing movements of the nineteenth century and the civil rights and black power movements of the twentieth century.

Not offered on a regular basis.

POLS 4600. The Legislative Process. 3 hours.

Prerequisite: POLS 1101-1101D.

The United States Congress with emphasis on leadership, procedures, and the role of parties and interest groups. Recent changes in Congress will be examined in light of theories of representation.

Offered every year on a regular basis.

POLS 4610/6610. The United States Presidency. 3 hours.

Prerequisite: POLS 1101-1101D.

The president of the United States, including the president's constitutional position, theories of executive dominance and executive privilege, the president's attempt to control the executive branch, and presidential-congressional relations.

Not offered on a regular basis.

POLS 4620. Public Administration and Democracy. 3 hours.

Prerequisite: POLS 1101-1101D.

Major issues of administration and public agencies, such as personnel, finance, administrative law, and the growth and significance of governmental bureaucracy. Not offered on a regular basis.

POLS 4630. Government Budgeting and Finance. 3 hours.

Prerequisite: POLS 1101-1101D.

Public revenue and expenditure policies, financial administration, and politics of the budgetary process. Not offered on a regular basis.

POLS 4640. Urban Politics. 3 hours.

Prerequisite: POLS 1101-1101D.

Local politics in the United States, including the development of cities, local government organization, participation of individuals and groups in urban politics, and policy making at the local level. Offered on a regular basis.

POLS 4650. State Politics. 3 hours.

Prerequisite: POLS 1101-1101D.

Politics in the American states. Similarities and differences in state constitutions, government structure, political participation, and public policies. Offered on a regular basis.

POLS 4660. Southern Politics. 3 hours.

Not open to students with credit in POLS 4190.

Prerequisite: POLS 1101-1101D.

Politics of individual states, emergence of the Republican party, political mobilization, consequences of reapportionment, and selected civil rights topics. Course may be taken through UGA Studies Abroad program in Oxford.

Offered every year on a regular basis.

POLS 4700. Constitutional Law: Powers. 3 hours.

Prerequisite: POLS 1101-1101D.

Supreme court cases on the separation of powers, national and state regulatory powers, the federal system, and the role of the courts.

Offered every year on a regular basis.

POLS 4710. Constitutional Law: Rights and Liberties. 3 hours.

Prerequisite: POLS 1101-1101D.

Individual rights and liberties, with emphasis on the First Amendment, other parts of the Bill of Rights, and the Fourteenth Amendment.

Offered every year on a regular basis.

POLS 4720. Criminal Procedure. 3 hours.

Prerequisite: POLS 1101-1101D.

The Fourth, Fifth, Sixth and Eighth Amendments to the United States Constitution, with specific attention to the law governing criminal arrest, trial, and punishment. Offered every year on a regular basis.

POLS 4730. Criminal Law. 3 hours.

Prerequisite: POLS 1101-1101D.

Substantive criminal law in the United States. State and federal statutes and selected cases, with particular focus on the definition and classification of crime, the elements of crime, types of crime, and justifications and excuses related to criminal liability.

Offered every year on a regular basis.

POLS 4740. Judicial Process and Behavior. 3 hours

Prerequisite: POLS 1101-1101D.

The relationship between law and society, types of law and the operation of the judicial branch of government particularly in the United States.

Offered every year on a regular basis.

POLS 4780H. Special Topics in Law and Judicial Processes (Honors). 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: POLS 1101-1101D and permission of Honors.

Selected major issues related to law and/or judicial processes.

Not offered on a regular basis.

POLS 4790. Special Topics in American Politics. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: POLS 1101-1101D.

Theories and practices of political institutions, behavior, or policy making in the United States.

Not offered on a regular basis.

POLS 4790H. Special Topics in American Politics (Honors). 3 hours. Repeatable for maximum 6 hours credit.

Not open to students with credit in POLS 4790.

Prerequisite: POLS 1101-1101D and permission of Honors.

Theories and practices of political institutions, behavior, or policy making in the United States.

Not offered on a regular basis.

POLS 4900. Law Enforcement Administration. 3 hours.

Prerequisite: POLS 1101-1101D.

The history, development, and function of police agencies in American government and society, and a critical evaluation of administrative policies and practices in police organizations.

Offered every year on a regular basis.

POLS 4960. Directed Readings and/or Projects. 3 hours.

Not open to students with credit in POLS 4960H.

Prerequisite: POLS 1101-1101D.

Individual study, reading, or projects under the supervision of a project director. Course may be taken through UGA Studies Abroad program in Verona.

Non-Traditional Format: Student works independently and meets with project director several times during the

semester to monitor progress and discuss requirements for written paper.
Not offered on a regular basis.

POLS 4960H. Directed Readings and/or Projects (Honors). 3 hours.

Not open to students with credit in POLS 4960.
Prerequisite: POLS 1101-1101D and permission of Honors.

Individual study, reading, or projects, under the supervision of a project director.

Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper.

Not offered on a regular basis.

POLS 4990H. Honors Thesis. 3 hours.

Prerequisite: POLS 1101-1101D and permission of Honors.

Individual research in the major or a closely related field.
Non-Traditional Format: Thesis course.

Offered fall, spring, and summer semesters.

POLS 5000. Political Science Internship. 3 hours.

Prerequisite: POLS 1101-1101D and permission of department.

Covers the academic portion of internships. May include seminars, readings, and research to supplement experience gained by interns with their assigned organizations.

Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper.

Offered fall, spring, and summer semesters.

POLS(SOCI) 5500. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Centers on regular and systematic analysis of experimental learning under direct faculty supervision.

Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper.

Not offered on a regular basis.

POLS(SOCI) 5510. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Centers on the design, execution, and reporting of original research related to the specific placement or internship.

Non-Traditional Format: Internship.

Not offered on a regular basis.

POLS(SOCI) 5520. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Criminal justice students are required to intern in an approved agency full time over the semester.

Non-Traditional Format: Internship.

Not offered on a regular basis.

(PORT) Portuguese

College of Arts and Sciences, Department of Romance Languages

Certain courses in Portuguese are not open to native speakers. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was Portuguese.

PORT 1001. Elementary Portuguese. 4 hours.

Not open to students with credit in PORT 1002.

Conversation, fundamentals of grammar, pronunciation, reading, and writing.

Offered fall, spring, and summer semesters.

PORT 1002. Elementary Portuguese. 4 hours.

Prerequisite: PORT 1001.

A continuation of Elementary Portuguese. Teaches conversation, fundamentals of grammar, pronunciation, reading, and writing.

Offered fall, spring, and summer semesters.

PORT 2001. Intermediate Portuguese. 3 hours.

Not open to students with credit in PORT 2002.

Prerequisite: PORT 1002 or permission of department. Extensive reading of texts of literary and cultural merit. Grammar review, conversation, and pronunciation. Not open to native speakers.

Offered fall and spring semesters.

PORT 2002. Intermediate Portuguese. 3 hours.

Not open to students with credit in PORT 3010.

Prerequisite: PORT 2001 or permission of department. A continuation of Intermediate Portuguese. Content based review of Portuguese grammar and systematic vocabulary and skill development. Integration of language, culture, and literature.

Offered every year on a regular basis.

PORT 2600. Intensive Portuguese. 3 hours.

Prerequisite: Permission of department.

Emphasizes conversational skills, reading, writing, and listening comprehension. Not open to native speakers. Not to be used to satisfy the undergraduate language requirement.

Offered every year on a regular basis.

Portuguese

PORT 2950. Study Abroad in Portuguese. 3 hours.

Prerequisite: Permission of department.

Portuguese language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

PORT 2960. Study Abroad in Portuguese. 3 hours.

Prerequisite: Permission of department.

Portuguese language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

PORT 2970. Study Abroad in Portuguese. 3 hours.

Prerequisite: Permission of department.

Portuguese language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

PORT 3010. Introduction to Language, Literature, and Culture of the Portuguese-Speaking World. 3 hours.

Prerequisite: PORT 2002 or permission of department. Emphasis is divided between linguistic, literary and cultural skills to promote student's ability to read and analyze literary and non-literary texts, while concentrating on expressing themselves accurately in both oral and written Portuguese. Given in Portuguese. Offered every year on a regular basis.

PORT 4010/6010. Advanced Language, Literature, and Culture of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or permission of department. Linguistic, cultural, and literary structures in Portuguese-speaking societies. Emphasis is divided between students' abilities to express themselves fluently in oral and written Portuguese and to identify and contextualize main literary genres and movements. Given in Portuguese. Offered every year on a regular basis.

PORT 4050/6050. Prose of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department. Representative prose texts from Portugal, Brazil, and Lusophone Africa analyzed in their cultural, social, and political contexts. Given in Portuguese. Offered every year on a regular basis.

PORT 4060/6060. Poetry of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department. Representative poetic texts from Portugal, Brazil, and Lusophone Africa analyzed in their cultural, social, and political contexts. Given in Portuguese. Offered every year on a regular basis.

PORT 4070/6070. Theater of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department. Representative plays from Portugal and Brazil analyzed with emphasis on drama as a literary genre, specific aspects of staging and performance, and socio-political context of theatrical production. Given in Portuguese. Offered every year on a regular basis.

PORT 4080/6080. Studies in Culture and Literature of the Portuguese-Speaking World. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PORT 3010 or PORT 4010/6010 or permission of department. Studies in culture and literature of the Portuguese-speaking world. Selected topics of special interest in their cultural, social, and political context. Offered every year on a regular basis.

PORT 4950. Directed Reading and/or Projects. 3 hours. Repeatable for maximum 15 hours credit.

Prerequisite: Permission of department and junior or senior standing. Individual study, reading, or projects under the guidance of a faculty member. Non-Traditional Format: Directed study. Offered fall and spring semesters.

PORT 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Junior or senior standing and permission of Honors. Individual study, reading, or projects under the guidance of a project director. Non-Traditional Format: Directed study. Offered on a regular basis.

PORT 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Junior or senior standing and permission of Honors. Individual study, reading, or projects under the guidance of a project director. Non-Traditional Format: Directed study. Offered on a regular basis.

PORT 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Junior or senior standing and permission of Honors.

Individual study, reading, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

PORT 4990H. Honors Thesis. 3 hours.

Prerequisite: Senior standing and permission of Honors.

Honors students have the opportunity to undertake individual research in the field of their major or in a closely related field.

Non-Traditional Format: Directed study.

Offered on a regular basis.

(POUL) Poultry Science

College of Agricultural and Environmental Sciences, Department of Poultry Science

POUL 2020-2020L. Introductory Poultry Science. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

The biology of the domestic fowl, basic nutrition, genetics, reproduction, embryology, processing, and management as they pertain to commercial poultry production.

Offered fall and spring semesters.

POUL 2040. Poultry Evaluation. 1 hour. One 2-hour lab period.

Evaluation of live poultry for production and breeder stock potential and poultry product quality evaluation and selection standards.

Offered fall semester.

POUL 2050. Poultry Judging. 1 hour. One 2-hour lab period.

Prerequisite: POUL 2040.

Judging of live poultry and poultry products.

Offered spring semester.

POUL 3600. Poultry Production. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: POUL 2020-2020L.

Application of the principles of poultry science to the practice of poultry production.

Offered spring semester.

POUL 3710. Commercial Poultry Management. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: POUL 3600.

Management practices and principles used in the business of producing eggs and poultry meat. Emphasis is placed on factors influencing costs and returns in poultry operations.

Offered spring semester.

POUL 3720. Poultry Breeding. 3 hours.

Inheritance of morphological and physiological characters with emphasis on the development of criteria for selection and development of genetically sound poultry breeding programs.

Offered fall semester.

POUL 3750. Poultry Nutrition. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: POUL 3600.

Biochemical aspects of the individual nutrients, their supply in terms of feedstuffs, and the formulation of practical poultry diets.

Offered fall semester.

POUL 3790. Poultry Seminar. 1 hour. One 1-hour lab period.

Prerequisite: POUL 3600.

Current problems and papers of scientific work in poultry presented by students.

Offered spring semester.

POUL 3800-3800L. Avian Anatomy and Physiology. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Avian anatomy at both the gross and microscopic level. A basis for studying the systematic physiology of the bird. Unique characteristics of avian physiology and morphology using the chicken as a model animal.

Offered fall semester.

POUL(FDST) 3860. Poultry Processing. 3 hours.

Prerequisite: POUL 3600 or FDST 2010 or FDST 3000 or permission of department.

Basic principles and methods of processing poultry and eggs. Broiler harvesting, slaughter, evisceration, plant sanitation, microbiology, inspection, grading, regulations, water and waste water handling, quality control and HACCP plans, further processing, and shell egg handling and processing.

Offered fall semester.

POUL 3910. Poultry Business Internship. 3 hours.

Prerequisite: Permission of department.

Poultry business firms provide the student with practical work experience in the daily operation and management of commercial poultry businesses.

Non-Traditional Format: Internship.

Offered fall, spring, and summer semesters.

POUL 3990. Special Problems in Poultry Science. 2-5 hours. Repeatable for maximum 5 hours credit.

Prerequisite: Permission of department.

Research or intensive study in a specialized area of poultry science.

Non-Traditional Format: Independent study.

Offered fall, spring, and summer semesters.

POUL 4010. Advanced Broiler Production. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: POUL 3600.

Current practices of broiler production encompassing nutrition, management, poultry health, and related areas.

Offered fall semester.

POUL 4020. Advanced Table Egg Production. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: POUL 3600.

Current practices in the commercial egg industry encompassing production, management, economics, and integration of commercial laying hen and egg operations.

Offered spring semester of even-numbered years.

POUL 4030. Advanced Breeder Production/Hatchery Management. 2 hours. One lecture and one 2-hour lab period.

Prerequisite: POUL 3600.

Current practices in broiler breeder management and current practices in incubation technology and hatchery management.

Offered spring semester.

POUL 4050/6050. Advanced Poultry Breeding. 3 hours.

Prerequisite: POUL 3720.

The development of practical poultry breeding programs. The mode of inheritance and relative heritability of various characteristics of economic importance and criteria for effective selection toward their improvement.

Offered spring semester of odd-numbered years.

POUL 4060/6060-4060L/6060L. Physiology of Avian Reproduction. 3 hours. Two lectures and one 2-hour lab period.

Prerequisite: BIOL 1108-1108L.

Lectures emphasize the reproductive physiology of poultry and integrate this information into management programs directed toward maximizing reproductive efficiency. Laboratories will emphasize the acquisition of skills and techniques in reproductive management, including the collection, preservation, and evaluation of semen, fertility evaluation, and proper incubation practices.

Offered spring semester of even-numbered years.

POUL 4330/6330. Basic Mycotoxicology. 3 hours.

Prerequisite: BIOL 1108-1108L and CHEM 2100 and CHEM 2100L.

Various mycotoxins which occur in feedstuffs as they relate to agricultural production. Fungal producers, chemical and physical properties of the toxins, prevalence and distribution in nature, biological effects and mode(s) of action, and means of control.

Offered spring semester.

(POUL)ANNU(ADSC) 4370/6370. Monogastric Nutrition. 3 hours.

Prerequisite: [ADSC 3300-3300L or POUL 3750] and BCMB(BIOL)(CHEM) 3100.

Comparative nutrition of monogastric animals, with special but not exclusive, consideration of poultry and swine.

Offered fall semester.

(PSYC) Psychology

College of Arts and Sciences, Department of Psychology

PSYC 1030H. General Psychology (Honors). 3 hours. Not open to students with credit in PSYC 1101.

Prerequisite: Permission of Honors.

A survey of psychology, with emphasis on theoretical and methodological issues.

Offered fall, spring, and summer semesters.

PSYC 1101. Elementary Psychology. 3 hours.

Not open to students with credit in PSYC 1030H.

The phenomena, laws, theories, and history of psychology. Topics include animal and human learning, motivation, perception, individual differences, social behavior, and biopsychology. Emphasis is on fundamental principles rather than on application. Students are given the opportunity to participate in ongoing research.

Offered fall, spring, and summer semesters.

PSYC 2100. Survey of Black Psychology. 3 hours.

Not open to students with credit in PSYC 4130 or AFAM 4250.

Black people as psychologists and as subjects of psychological inquiry. The history of Black psychology and African philosophy as a basis for Black psychology will be discussed. Other topics include self-concept and identity, intelligence and school achievement, the Black family, and Black speech and language.

Not offered on a regular basis.

PSYC 2101. The Psychology of Adjustment. 3 hours.

Psychological adjustment, including appropriate and inappropriate reactions to frustration and stress; solutions to conflict, fear, and anxiety; building self-concept and improving interpersonal relations.

Offered fall, spring, and summer semesters.

PSYC(AFAM) 2150. Understanding Cultural Diversity. 3 hours.

Cross-cultural psychology, including an examination of issues such as conformity, leadership, and attributional style as they vary across different cultures, with consideration of their implications for the emerging world.

Not offered on a regular basis.

PSYC 2520. Comparative Animal Behavior. 3 hours.
Prerequisite: PSYC 1101.

Methods, principles, and findings of the study of animal behavior. The value of conservation of natural populations of animals and how their behavior and the behavior of coexisting species, including humans, affects conservation.

Not offered on a regular basis.

PSYC 2530. Mental Processes. 3 hours.

Prerequisite: PSYC 1101.

Mental processes such as perception, imagery, memory, attention, problem solving, decision making, and thinking.

Not offered on a regular basis.

PSYC 2540. Basic Learning and Motivation. 3 hours.

Prerequisite: PSYC 1101.

The study of learning, including acquisition, extinction, generalization/discrimination, reinforcement, punishment, and motivation.

Not offered on a regular basis.

PSYC 2560. Interpersonal Behavior. 3 hours.

Prerequisite: PSYC 1101.

The social behavior of adults from a psychological perspective, including aggression, interpersonal attraction, leadership, conformity, and persuasion.

Not offered on a regular basis.

PSYC 2570. Applications of Psychology. 3 hours.

Prerequisite: PSYC 1101.

The applications of psychology to humans, especially for understanding, measuring, changing, and improving behavior. An introduction to personality, abnormal behavior, clinical psychology, and human relations.

Not offered on a regular basis.

PSYC 2980. Research Design in Psychology. 3 hours.

Prerequisite: PSYC 1101 and (BIOL 1103-1103L or BIOL 1107-1107L) and STAT 2000.

Design of research in psychology. Experimental and quasi-experimental design, as well as the general principles of the scientific method. Direct experience with the formulation of hypotheses, collection of data, and description of research findings is required.

Offered fall, spring, and summer semesters.

PSYC 2990. Research Analysis in Psychology. 3 hours.

Prerequisite: PSYC 2980.

Basic concepts and quantitative methods used to describe, analyze, and draw logical conclusions from data collected in psychological research. Direct experience with data analysis and description of research findings is required.

Offered fall, spring, and summer semesters.

(PSYC)EPSY(ARTI) 3020. Introduction to Cognitive Science. 3 hours.

Prerequisite: PSYC 1101 or PHIL 1010 or EPSY 2020. Interdisciplinary study of mind and intelligent activity that forms cognitive sciences. Contributions of psychology, philosophy, linguistics, biology, anthropology, computer science, and education toward uncovering important aspects of the mind and intelligent activity are discussed.

Offered on a regular basis.

(PSYC)AFAM 3150. Introduction to Black Psychology. 3 hours.

Prerequisite: Permission of department.

Deconstruction of traditional thought, behavior, and development as well as reconstruction of the same on contemporary terms; testing of nuances and varieties of multicultural and indigenous models. The designs and projected future of the Black Psychology Movement.

Not offered on a regular basis.

PSYC 3230. Abnormal Psychology. 3 hours.

Prerequisite: PSYC 1101.

The varieties of abnormal behavior: their explanation, assessment, and treatment.

Offered fall, spring, and summer semesters.

PSYC 3260. Psychology of Sex and Sexual Deviation. 3 hours.

Prerequisite: PSYC 1101.

Research in human sexual behavior. Emphasis is given to empirical findings and current personal and social implications. Topics include variations in sexual behavior, deviance, social patterns, assessment, and treatment.

Not offered on a regular basis.

PSYC 3300. Social and Personality Development. 3 hours.

Prerequisite: PSYC 1101.

Factors that influence children's social behavior as they are integrated into adult society. Included are basic theories and research on the development of sex roles, aggression, altruism, moral standards, dependency, independence, achievement, and peer relations.

Not offered on a regular basis.

PSYC 3510. Theories of Personality. 3 hours

Prerequisite: PSYC 1101.

The major theories of personality with attention given to current research and methodological issues in the field.

Not offered on a regular basis.

PSYC 3810. Psychology of Health. 3 hours.

Prerequisite: PSYC 1101.

Psychological influences on health, illness, and responses to those states, as well as psychological origins and outcomes of health policy and health interventions.

Not offered on a regular basis.

Psychology

PSYC 4100. Cognitive Psychology. 4 hours.

Not open to students with credit in PSYC 2530.

Prerequisite or corequisite: PSYC 2990.

Contemporary theories of human information processing. Major topics include attention, mental representations, categorization, short-term and long-term memory, psycholinguistics, reasoning, problem-solving, judgment, and decision making. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4110. Learning. 4 hours.

Not open to students with credit in PSYC 2540.

Prerequisite or corequisite: PSYC 2990.

The phenomena and theories of animal and human learning, including Pavlovian conditioning, operant conditioning, discrimination learning and verbal learning, and organization and processing in memory. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4120. Sensation and Perception. 4 hours.

Prerequisite or corequisite: PSYC 2990.

How organisms sense and perceive the environment. Topics discussed: anatomy and physiology of the sensory systems, types of stimuli affecting sensory systems, and current knowledge and theories of our perceptual abilities. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4130. Physiological and Comparative Psychology. 4 hours.

Not open to students with credit in PSYC 2520.

Prerequisite or corequisite: PSYC 2990.

The biological bases of human and nonhuman behavior, with emphasis on underlying physiological mechanisms, and on the development, evolution, and function of behavior. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4200. Social Psychology. 4 hours.

Not open to students with credit in PSYC 2560.

Prerequisite or corequisite: PSYC 2990.

Research and theory on social behavior, including attitudes, social influence, group dynamics, and person perception. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4210. Psychological Testing. 4 hours.

Prerequisite or corequisite: PSYC 2990.

The measurement of individual and group differences in abilities, interests, achievement, and traits. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4220. Developmental Psychology. 4 hours.

Prerequisite or corequisite: PSYC 2990.

Research and theory on the psychological development of the maturing human, including social/emotional

and cognitive development. Laboratory/research experience is included.

Not offered on a regular basis.

PSYC 4230. Psychology of the Workplace. 4 hours.

Prerequisite or corequisite: PSYC 2990.

Major topics in industrial-organizational psychology with emphasis on organizational and personnel psychology applied to business, industry, and government. Laboratory/research experience is included.

Not offered on a regular basis.

(PSYC)AFAM 4500/6500. Psychology of Prejudice. 3 hours.

Prerequisite: (PSYC 1101-1010D or SOCI 1101) and senior standing.

Motivational, cognitive, social, and cultural factors that lead to discrimination in our society and various perspectives found in the research on discrimination.

Not offered on a regular basis.

(PSYC)AFAM 4550/6550. Classic Studies in Black Psychology. 3 hours.

Prerequisite: AFAM(PSYC) 3150 or permission of department.

Studies which have had major social or scientific impact on the lives of Black Americans and the way black people have been viewed within psychology. Approach is historical and interdisciplinary.

Not offered on a regular basis.

PSYC 4600/6600. Psychology of Women. 3 hours.

Prerequisite: PSYC 3230 or PSYC 4200 or PSYC 4220.

Women as the subject of psychological inquiry. Topics include personality theory, psychopathology, psychological aspects of reproductive health, psychological reaction to being victimized, and life crises.

Not offered on a regular basis.

PSYC 4650. Cognitive Development. 3 hours.

Prerequisite: PSYC 4220.

Theory and research in cognitive development from infancy to adolescence, with emphasis on symbolic thought, memory, intelligence, and individual differences.

Not offered on a regular basis.

PSYC 4700/6700. Psychology of Aging. 3 hours.

Research in gerontology, with emphasis on learning, personality, attitudes, perception, ability, and adjustment in the aged.

Not offered on a regular basis.

PSYC 4800. Special Problems. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: PSYC 2990 and permission of department. A course for the advanced undergraduate who wishes to participate in supervised research.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

PSYC 4850. Directed Readings in Psychology. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: PSYC 2990 and permission of department. A course for the student who wishes to read comprehensively in a particular content area under the direction of a faculty member.

Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PSYC 4910. Advanced General Psychology. 3 hours. Prerequisite: Permission of department.

Review, summary, and integration of psychology as a whole. Attention will be given both to content and to psychology as a profession.
Not offered on a regular basis.

PSYC 4920. History of Psychology. 3 hours.

Prerequisite: Permission of department. The history of psychology and its antecedents, both classical and modern.
Not offered on a regular basis.

PSYC 4930/6930. Systems of Psychology. 3 hours.

Prerequisite: Permission of department. Major theoretical systems in psychology, with special emphasis on developments of the last half-century, especially behaviorism and cognitivism.
Not offered on a regular basis.

PSYC 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: PSYC 1101 and senior standing and permission of Honors. Supervised research, reading, or other projects. Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PSYC 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: PSYC 1101 and senior standing and permission of Honors. Supervised research, reading, or other projects. Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PSYC 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: PSYC 1101 and senior standing and permission of Honors. Supervised research, reading, or other projects. Non-Traditional Format: Directed study.
Offered fall, spring, and summer semesters.

PSYC 4990H. Honors Thesis. 3 hours.

Prerequisite: PSYC 1101 and senior standing and permission of Honors. Individual research in his or her major or in a closely related field. Non-Traditional Format: Students will meet with faculty members on a regular basis.
Offered fall, spring, and summer semesters.

PSYC 5100. Seminar in Psychology. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Current topics and new developments in areas of psychology which are not covered in other courses.
Not offered on a regular basis.

PSYC 5750/7750. Principles of Primate Phylogeny. 3 hours.

Prerequisite: Junior or senior standing. Interrelationships among morphology, behavior, and systematics for students studying primate behavior.
Not offered on a regular basis.

PSYC 5760/7760. Comparative Physical and Psychological Development of the Primates. 3 hours.

Prerequisite: Junior or senior standing. Influence of species and developmental environment on normal and abnormal behavioral development.
Not offered on a regular basis.

PSYC 5770/7770. Organization of Primate Social Groups. 3 hours.

Prerequisite: Junior or senior standing. The interaction of ecology, phylogeny, individual behavior, and group organization from a comparative perspective.
Not offered on a regular basis.

PSYC 5850. Psychopharmacology - Drugs and Behavior. 3 hours.

Prerequisite: PSYC 4130 or permission of department. The effects of psychoactive drugs on consciousness and behavior. The mechanisms of drug action on neurotransmitter systems are emphasized. Topics include the relationship between behavior and endogenous neurochemical activity, therapeutic agents in psychopathology, and drugs of abuse.
Not offered on a regular basis.

(READ) Reading Education

College of Education, Department of Reading Education

(READ)RGTR 0990. Reading Improvement. 1 hour

Repeatable for maximum 9 hours credit. Preparation for the reading portion of the Regent's exam. Non-Traditional Format. This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

READ 3420. Reading Instruction for Young Children. 3 hours.

Principles and methods for teaching reading in the elementary school.
Offered fall and spring semesters.

Reading Education / Real Estate

READ 3430. Reading Assessment and Teaching Young Children. 3 hours.

Formal and informal methods for assessing children's reading ability and planning instruction. Offered fall and spring semesters.

READ 3520. Teaching Reading in the Middle School. 3 hours.

Principles and methods for teaching reading in the middle school. Offered fall and spring semesters.

READ 3530. Content Area Reading in the Middle School. 3 hours.

Fostering middle grade students' reading and studying in various subject areas; strategies for effective use of textual materials across the curriculum. Offered fall and spring semesters.

READ 4000. Special Problems in Reading Education. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. Approved independent project pertaining to Reading Education. Non-Traditional Format: Independent study. Offered fall, spring, and summer semesters.

READ 4010. The Teaching of Reading. 3 hours.

Methods, materials, and issues relevant to teaching reading from kindergarten through the twelfth grade. Offered fall, spring, and summer semesters.

READ 4020. The Teaching of Reading in Pre-Kindergarten. 3 hours.

For students enrolled in the pre-kindergarten education program, focusing on methods, materials and issues for the teaching of reading in pre-K classrooms. Offered spring semester.

READ 4030. Teaching Reading in the Secondary Schools. 3 hours.

The concepts and strategies for developing reading and study skills needed by students in secondary schools. Offered fall and spring semesters.

(REAL) Real Estate

Terry College of Business, Department of Insurance, Legal Studies, Real Estate and Management Science

REAL 4000. Real Estate. 3 hours.

Real estate law, markets, valuation, and finance. Designed for non-real estate majors as well as a basis for more advanced courses. Offered on a regular basis.

REAL 4800. Internship in Real Estate. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: REAL 4000 and permission of department. Practical and applied experience in real estate. Student must be sponsored by a business or government agency. Non-Traditional Format: Internship. Offered on a regular basis.

REAL 5070. Real Estate Development. 3 hours.

Prerequisite: REAL 4000. Development process with particular emphasis on analyzing the feasibility of design, location, and construction. Offered on a regular basis.

REAL 5080. Principles of Valuation. 3 hours.

Prerequisite: REAL 4000. Valuation of real property rights. Provides an in-depth look at conventional valuation techniques in addition to modern valuation methods based on statistical inference and industry-based computer software. A broad understanding of the role of real estate valuation within the real estate field. Offered on a regular basis.

REAL 5090. Real Estate Asset Management. 3 hours.

Prerequisite: REAL 4000. Asset management decisions of individuals and corporations engaged in the real estate decision making process. Topics in real estate asset management include site selection, acquisition (lease or purchase), development, financing, management, and disposition. This is an intensive case study course intended for real estate majors. Offered on a regular basis.

REAL(FINA) 5100. Real Estate Finance. 3 hours.

Prerequisite: REAL 4000. The instruments, techniques, and institutions of real estate finance; sources of funds; mortgage risk analysis; emphasis on typical policies and procedures used in financing of residential, industrial, and commercial properties. Offered on a regular basis.

(REAL)LEGL 5200. Real Estate Law. 3 hours.

Prerequisite: REAL 4000. How law impacts real estate, its ownership, conveyance, and development. Real property ownership interests, restrictions on such interest, methods of transferring such interest, private and public land-use controls, and legal transactions involving real estate, such as gifts, sales, and leases. Offered on a regular basis.

RELI) Religion

College of Arts and Sciences, Department of Religion

RELI 1001. Introduction to Judaism, Christianity, and Islam. 3 hours.

Judaism, Christianity, Islam, and background religions, such as those of Mesopotamia, Egypt, Greece, and Rome.

Offered fall, spring, and summer semesters.

RELI 1002. Introduction to the Religions of India, China, and Japan. 3 hours.

The religions of India, China, and Japan, such as Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

Offered fall, spring, and summer semesters.

RELI 1003. Introduction to Religious Thought. 3 hours.

Religion including various theological perspectives and the philosophy of religion.

Offered fall, spring, and summer semesters.

RELI 2001H. Introduction to Judaism, Christianity, and Islam (Honors). 3 hours.

Not open to students with credit in RELI 1001.

Prerequisite: Permission of Honors.

Judaism, Christianity, Islam and background religions, such as those of Mesopotamia, Egypt, Greece, and Rome.

Offered every year on a regular basis.

RELI 2002H. Introduction to the Religions of India, China, and Japan (Honors). 3 hours.

Not open to students with credit in RELI 1002.

Prerequisite: Permission of Honors.

The religions of India, China, and Japan, such as Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

Offered every year on a regular basis.

RELI 2003H. Introduction to Religious Thought (Honors). 3 hours.

Not open to students with credit in RELI 1003.

Prerequisite: Permission of Honors.

Religion including various theological perspectives and the philosophy of religion.

Offered every year on a regular basis.

RELI 2004. Introduction to Religion in Native American Cultures. 3 hours.

Native religious traditions of selected cultures of North America, with special attention to cultures of the Southwest, Great Plains, and Southwest.

Offered every even-numbered year on a regular basis.

RELI(AFAM) 2005. African American Religions: An Introduction. 3 hours.

Major and selected contemporary religious groups and movements among African Americans.

Offered every year on a regular basis.

RELI(AFAM) 3000. The Bible in the Third World. 3 hours.

Prerequisite: RELI 1001 or RELI 1002 or permission of department.

Interpretations of the Bible in Africa, Asia, Central and South America and the influence upon minority communities in the United States.

Offered every even-numbered year on a regular basis.

RELI 3030. Religion and the Media. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Religion in the mass media. Topics may include the coverage of religious issues or events by the news media and the presentation of religious themes or concepts in the entertainment media.

Offered every odd-numbered year on a regular basis.

RELI(HIST) 3150. Religion in the United States. 3 hours.

Prerequisite: Junior standing or permission of department.

The significant developments in American religious history and thought from Puritanism to the present with attention to the social and cultural contexts in which various religious movements arose.

Not offered on a regular basis.

RELI 3300. Introduction to East Asian Religions. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The history, beliefs, and practices of major traditions of China and Japan, particularly Confucianism, Taoism, and Buddhism. Special attention will be paid to the evolution of diverse forms within each tradition, and to the interactions of the different traditions.

Offered every even-numbered year on a regular basis.

RELI 4001/6001. Old Testament/Hebrew Bible Literature. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The nature, content, and problems of the Old Testament/Hebrew Bible, with attention given to historical data, literary forms, and ancient Near Eastern cultural backgrounds.

Offered every even-numbered year on a regular basis.

RELI 4002/6002. Prophetic Literature of the Old Testament/Hebrew Bible. 3 hours

Prerequisite: Junior or senior standing or permission of department.

The origin and development of the phenomenon of prophecy as it existed throughout the history of ancient Israel.

Offered every even-numbered year on a regular basis.

RELI 4003/6003. Ancient Israelite Religion. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

Origins of the religion of ancient Israel, its emergence from and continuities with ancient West Semitic religion and culture. Historical and comparative methods, emphasizing current knowledge of Near Eastern history and religions contemporary with ancient Israel. Offered every odd-numbered year on a regular basis.

RELI 4040/6040. Apocalyptic Literature. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

Apocalyptic literature from its origins in the sixth and fifth centuries BCE down to its flourishing in Hellenistic and Roman times. Texts to be studied include Isaiah 24-27, 40-66, Zechariah 9-14, Joel, Malachi, Daniel, I Enoch, IV Ezra, Baruch, Qumran material, Mark 13 and the Book of Revelation. Questions bearing on contemporary theological significance will also be discussed. Offered every even-numbered year on a regular basis.

RELI 4070/6070. Judaism. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

The interaction of Jewish history and Western civilization, with emphasis upon the development of Jewish religion in the biblical, rabbinic, and modern periods. Offered every even-numbered year on a regular basis.

RELI 4071/6071. The Holocaust. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

The background and legacy of the destruction of European Jewry from 1933 to 1945. Topics include: the historical context, Holocaust art, literature, and film, the reactions of rescuers and bystanders, and theological issues raised by the Holocaust. Offered every even-numbered year on a regular basis.

RELI 4072/6072. American Judaism. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

An examination of what it means, and has meant, to be a Jew in the United States, with emphasis upon the historical experience and religious expressions of American Jews. Offered every odd-numbered year on a regular basis.

RELI 4080/6080. New Testament Literature. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

The nature, content, and problems of New Testament literature, with particular attention given to its canonization and textual transmission. Offered every even-numbered year on a regular basis.

RELI 4081/6081. Jesus. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

Although primarily a study of what Jesus taught, attention is given to the literary and environmental background of his teaching, the historical life of the teacher and the contemporary validity of what he taught. Offered every odd-numbered year on a regular basis.

RELI 4082/6082. Life and Letters of Paul. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

An historical-exegetical study of the life and letters of Paul, the relation between Acts and the Pauline epistle, early non-Pauline Gentile Christianity, Pauline theology, and its lasting impression on Christianity. Offered spring semester of odd-numbered years.

RELI 4083/6083. The New Testament World. 3 hours.
Prerequisite: Junior or senior standing or permission of department.

The political, social and religious influences on the New Testament writings. Special attention is given to intertestamental Judaism and Hellenistic and Roman religion as background to New Testament Christianity. Offered every odd-numbered year on a regular basis.

RELI 4101/6101. History of Christian Theology (Ancient-Medieval). 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The development of Christian thought from the first through the fourteenth century as expressed in the writings and practices of the Christian community and its leading thinkers.

Offered every even-numbered year on a regular basis.

RELI 4102/6102. History of Christian Theology (Modern-Contemporary). 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The development of Christian thought from the fifteenth century to the present as expressed in the writings and practices of the Christian community and its leading thinkers.

Offered every even-numbered year on a regular basis.

RELI 4105/6105. Women in Christian History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The relationship between women and Christianity, particularly concerning matters involving gender equality in church and society.

Offered every odd-numbered year on a regular basis.

RELI 4107/6107. American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Major and innovative religious organizations, ideas, movements, and personalities as they express themselves in particular religious settings as well as the manner in which they have influenced other aspects of American culture.

Offered every odd-numbered year on a regular basis.

RELI(AFAM) 4201/6201. African American Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The religious traditions of African Americans from Colonial times to the present; major religious movements, personalities, and ideas and their relationship to various aspects of American culture.

Offered every odd-numbered year on a regular basis.

RELI(AFAM) 4202/6202. Southern Religious History. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The origins, growth, and current practices of religion in the American South. The interaction between religion and other aspects of Southern culture, such as racial and gender concerns, education, Darwinian science, temperance, and politics.

Offered every even-numbered year on a regular basis.

RELI(AFAM) 4203/6203. The Bible in the Black Church. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Biblical interpretation in black America from 1865 to the present.

Offered every even-numbered year on a regular basis.

RELI 4300/6300. Islam and Its World. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islam as a religious and sociocultural phenomenon. The fundamental principles of the Islamic faith, Qu'ran, the Sunna of Muhammad, Islamic sectarianism, Islamic law, theology, and mysticism, and themes in Islamic art. The course will also survey Islam in its various forms throughout the world.

Offered every even-numbered year on a regular basis.

RELI 4301/6301. Islamic Thought in the Caliphal Age. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic scholarship from the eighth through the fourteenth centuries. Principal topics covered will include the Qur'an and Qur'anic exegesis, the Hadith tradition, Islamic law, theology, philosophy, and Sufi mysticism.

Offered every even-numbered year on a regular basis.

RELI 4302/6302. Islam and the Modern World. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic modernism and revivalism as a response to Western cultural penetration since the eighteenth century. Subjects covered will include Sufi reformism, Wahhabism, the Salafiyya movement, Islamic "Fundamentalism," the Iranian Revolution, women's rights, and Western perceptions of Islam.

Offered every odd-numbered year on a regular basis.

RELI 4303/6303. The Sufi Way. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Islamic mysticism, both as a set of metaphysical doctrines and as it is expressed in religious practices. Particular attention will be given to the doctrinal development of Sufism, its literature, major figures, and the process of consciousness transformation.

Offered every odd-numbered year on a regular basis.

RELI 4400/6400. The History of Religions. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The nature of early primitive religions and the main outlines of the chief living religions of the world. The method will be both historical and analytical.

Offered every even-numbered year on a regular basis.

RELI 4401/6401. The Buddhist Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Buddhism from its origin in the life and teachings of the Buddha through the period of philosophical ferment in India, and its thought and institutions in the East and the West up to the present.

Offered every odd-numbered year on a regular basis.

RELI 4402/6402. Confucianism and Chinese Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Confucianism and its place in traditional Chinese religion, thought, and culture. Emphasis on the teachings of foundational thinkers such as Confucius, Mencius, and Hsun-tzu.

Offered every odd-numbered year on a regular basis.

RELI 4403/6403. The Taoist Tradition. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Taoism and its place in traditional Chinese religion, thought, and culture. Emphasis on the classical texts, Lao-tzu and Chuang-tzu; the evolution of the later Taoist religion; and the many varieties of Taoist spirituality.

Offered every even-numbered year on a regular basis.

RELI 4404/6404. Japanese Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Religion in Japan from earliest times to the present, with emphasis upon Shinto, the domestication of Buddhism, and the relationship of religion to the Japanese state and "national identity." Particular attention given to the development of Zen in Japan.

Offered every odd-numbered year on a regular basis.

RELI(PHIL) 4500/6500. Philosophy of Religion. 3 hours.

Prerequisite: RELI 1003 or PHIL 1000 or PHIL 2200 or PHIL 2400.

The meaning, nature, and validity of religious discourse, beliefs, and practices, involving theories concerning the existence and nature of God and humanity's relation to God.

Not offered on a regular basis.

RELI 4510/6510. Indian Philosophy and Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Traces the path of India's religious and philosophical thought from the Indus civilization to the present. Attention will be given to interpreting the orthodox Hindu systems as well as Buddhism and their related religious practices, ethics, castes, and sects.

Offered every odd-numbered year on a regular basis.

RELI 4520/6520. Constructive Theology. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The aims, methods, and content of theology as related to the theistic religions of humanity.

Offered every odd-numbered year on a regular basis.

RELI 4530/6530. Theology and Culture. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

The relation of theology to philosophy, science, technology, and the arts, with special attention to the theological attempts to deal with the impact of science and technology upon culture and civilization.

Offered every odd-numbered year on a regular basis.

RELI(ANTH) 4640/6640. Anthropology of Religion. 3 hours.

Prerequisite: Junior or senior standing or permission of department.

Anthropological approaches to the world's major religions as they relate to complex societies.

Not offered on a regular basis.

RELI 4800. Reading and Research in Religion. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: Permission of department.

Directed study in reading and research in religion.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

RELI 4900. Topics and Problems. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: Permission of department.

Topics and problems in religion with emphasis upon extensive reading in primary sources and individual and/or group research projects. Selection of topics will vary with instructor and interest of students.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

RELI 4910/6910. Topics in Asian Religions. 3 hours. Repeatable for maximum 9 hours credit. Three 3-hour lab periods.

Prerequisite: RELI 3300 or permission of department. Selected topics in the study of one or more of the religions of Asia.

Not offered on a regular basis.

RELI 4960H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

RELI 4970H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

RELI 4980H. Directed Reading and/or Projects (Honors). 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

RELI 4990H. Honors Thesis. 3 hours. Three 3-hour lab periods.

Prerequisite: Permission of Honors.

Individual research in the field of his/her major or in a closely related field.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

(RLST) Recreation and Leisure Studies

College of Education, Department of Recreation and Leisure Studies

RLST 1030. Professional Opportunities in Recreation and Leisure Services. 1 hour.

Not open to students with credit in RLST 2030.

Professional opportunities in recreation, parks, and leisure services.

Offered on a regular basis.

RLST 2030. Introduction to Recreation and Leisure Studies. 3 hours.

Not open to students with credit in RLST 1030.

The history and development of the organized park and recreation movement, the theoretical underpinnings of recreation and leisure studies, and contemporary recreation and leisure services.

Offered fall semester.

RLST 2800. Programming in Leisure Services. 3 hours.

Prerequisite: RLST 2030 or permission of department. A comprehensive approach to leisure programming. Emphasis on elements of program planning and organization, leadership, and supervision. Offered spring semester.

RLST 2800L. Laboratory in Recreation Leadership. 1 hour. One 1-hour lab period.

Prerequisite: RLST 2030 or permission of department. Corequisite: RLST 2800.

Techniques of leadership in recreation and leisure settings. Offered spring semester.

RLST(FORS) 3310. Outdoor Recreation and Environmental Awareness. 3 hours.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Environmental policies and land ethics of natural resource management agencies. Emphasis will be placed on understanding outdoor recreation behavior and issues arising from human-environment interactions, including carrying capacities and human-wildlife conflicts.

Offered fall semester.

RLST 3450. Practicum in Recreation and Leisure Services. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Volunteer work in a local leisure service agency.

Non-Traditional Format: Student performs forty-five hours of volunteer service work in an area leisure service agency.

Offered fall and spring semesters.

RLST 3850. Recreation for Special Populations. 3 hours.

Prerequisite: RLST 2030.

Recreation service delivery to special populations. Solutions to barriers to full leisure participation placed before the developmentally disabled and physically impaired.

Offered fall semester.

RLST 4000. Special Problems in Recreation and Leisure Studies. 1-6 hours. Repeatable for maximum 9 hours credit.

Specialized study in recreation and leisure studies. May involve intensive library investigation, the collection and analysis of original data pertinent to a given problem, or course work on a new topic with other students. Non-Traditional Format: Student does directed reading with faculty member or group of students meet with faculty member on special topics course.

Offered on a regular basis.

RLST 4020. Introduction to Therapeutic Recreation. 3 hours.

Prerequisite: RLST 2800 and RLST 2800L and RLST 3850.

Historical, philosophical, and professional foundations of therapeutic recreation. Topics include the continuum of service and settings, terminology used, interrelationships in allied health, participant characteristics, and professional issues.

Offered spring semester.

RLST 4030. Therapeutic Recreation Facilitation Techniques. 3 hours.

Prerequisite: RLST 4020.

Facilitation techniques employed in therapeutic recreation. Topics include leisure education, life management skills, and therapeutic activity skills.

Offered spring semester.

RLST 4040. Therapeutic Recreation Processes. 3 hours.

Prerequisite: RLST 2800 and RLST 2800L and RLST 3850.

Programming, leadership strategies, and professional issues.

Offered fall semester.

RLST 4270. Outdoor Recreation Field Laboratory. 3 hours.

Prerequisite: RLST 2030 or permission of department. Field trip to study experimental campground design and construction, energy alternatives, environmental education programs, and interpretation programs. Various state and federal recreation professionals meet with the group to discuss intensive recreation resource management techniques.

Non-Traditional Format: Intensive eight-day field trip. Offered summer semester.

RLST 4840. Environmental Interpretation for Recreation. 3 hours.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Methods, principles, and philosophies of environmental interpretation in natural systems, with specific reference to natural resource recreation contexts. The roles of environmental education and persuasive communication in promoting environmental attitudes and behaviors will be emphasized.

Not offered on a regular basis.

RLST 4870. Organization and Administration of Leisure Services. 3 hours.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Management principles, concepts, and practices applied to organizing and administering recreation and park services.

Offered spring semester.

RLST 4890. Seminar in Recreation as a Profession. 1 hour.

Current aspects of the field of recreation as a profession. Trends and problems of concern to graduating recreation majors preparing for internships. Offered fall and spring semesters.

RLST 4900. Research and Evaluation in Leisure Services. 3 hours.

Prerequisite: RLST 2800 and RLST 2800L.

The nature and value of research in leisure services. Understanding and using research, including needs assessment and program evaluation, in management, planning, and administration of leisure facilities and programs.

Offered fall semester.

RLST 5130/7130. Leisure Education. 3 hours.

Prerequisite: (RLST 2800 and RLST 2800L) or permission of department.

Principles of educating for leisure. Review of techniques for enhancing leisure awareness, leisure attitudes, decision-making skills, and resource utilization. Emphasis is on the recreation professional's facilitative role in assisting individuals and groups to achieve satisfying lifestyles.

Offered spring semester.

RLST 5320/7320. Women and Leisure. 3 hours.

Prerequisite: Permission of department.

Feminist critique of leisure traditions, including women's representation in leisure theories and services. Examines leisure as a context for hegemonic relationships. Offered spring semester of even-numbered years.

RLST 5340/7340. Advanced Administrative Practices in Leisure Services. 3 hours.

Prerequisite: RLST 4870.

Techniques in budgeting and finance, personnel management, facility management, and public relations, as well as organizational theory and legislative issues.

Offered fall semester.

(RLST)FORS 5400/7400-5400L/7400L. Park Management. 3 hours. Two lectures and one 2-hour lab period.

Management of public lands and open spaces, including management tools, type and nature of physical effects, visitor management principles, and site development. Use of maps, aerial photos, and compass in recreation area development.

Offered spring semester.

RLST 5430/7430. Camping Administration. 3 hours.

Prerequisite: RLST 4870.

Camps with particular emphasis on program planning, selection and training of staff, campsite selection and development, health and safety, accessibility, and program evaluation.

Not offered on a regular basis.

RLST 5700. Internship in Recreation and Leisure Services. 15 hours.

Field placement in leisure service agency for entire semester. Training in provision and management of leisure programs and/or resources with agency and faculty supervisor.

Non-Traditional Format: Full time (forty hours/week) supervised field work.

Offered on a regular basis.

(RMIN) Risk Management and Insurance

Terry College of Business, Department of Insurance, Legal Studies, Real Estate and Management Science

RMIN 4000. Risk Management and Insurance. 3 hours.

Risk identification, risk evaluation, and risk treatment methods. Consideration is given to both business and personal risks, with an emphasis on insurance as a risk management tool. Designed for non-majors as well as a basis for more advanced courses.

Offered on a regular basis.

RMIN 4800. Internship in Risk Management and Insurance. 1-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: RMIN 4000 and permission of department. Practical and applied experience in risk management and insurance. Student must be sponsored by a business or government agency.

Non-Traditional Format: Internship.

Offered on a regular basis.

RMIN 5100. Commercial Property and Liability Insurance. 3 hours.

Prerequisite: RMIN 4000.

Property and liability risks and the effective management of these risks with insurance. Application of property insurance to pure risk exposures including direct and indirect property. Application of liability insurance to general business liability and catastrophic liability risks. Current topics in the field of commercial property and liability insurance. Group case study.

Offered on a regular basis.

RMIN 5110. Employee Benefits. 3 hours.

Prerequisite: RMIN 4000.

Approaches to problems of employee security from the perspective of businesses. Topics include pensions, profit-sharing plans, 401(k) plans, group life and health plans, and flexible benefit programs.

Offered on a regular basis.

RMIN 5510. Life and Health Insurance. 3 hours.

Prerequisite: RMIN 4000.

Individual life, health, and annuity contracts within a financial planning context.

Offered on a regular basis.

RMIN 5530/7530. Advanced Property Insurance. 3 hours.

Prerequisite: RMIN 5100 or permission of department. Property risks facing businesses and the effective management of these risks with insurance. Practical application of property insurance to pure risk exposures, including direct and indirect property, inland marine, crime, boiler and machinery, and catastrophic property risks.

Offered on a regular basis.

RMIN 5540/7540. Advanced Liability Insurance. 3 hours.

Prerequisite: RMIN 5100 or permission of department. Liability risks facing businesses and the effective management of these risks with insurance. Practical application of liability insurance to pure risk exposures, including motor vehicle liability, professional and general liability, environmental liability, employment practices and workers' compensation, and fiduciary liability.

Offered on a regular basis.

RMIN 5570. Insurer Operations and Policy. 3 hours.

Prerequisite: RMIN 4000. Analysis of insurer operations and the issues facing managers of such operations. Topics covered include regulation, accounting, finance, marketing, underwriting, reinsurance, ratemaking, and claims.

Offered on a regular basis.

RMIN 5950. Corporate Risk Management. 3 hours.

Prerequisite: RMIN 5100. The operational and financial risks faced by firms and the study of various methods of handling these risks, including loss prevention, risk retention, self-insurance, corporate insurance programs, and capital markets.

Offered on a regular basis.

(ROML) Romance Languages

College of Arts and Sciences, Department of Romance Languages

ROML 2550. Latino Literature, Language, and Culture. 3 hours.

Not open to students with credit in SPAN 2550. Critical analysis of the literary, socio-linguistic, and cultural presence of representative Hispanic groups in the United States. Designed for non-speakers of Spanish. Given in English.

Offered every year on a regular basis.

ROML 3000. Topics in Romance Languages. 3 hours.

Selected topics in the Romance Languages. Taught in English. No credit allowed to majors and minors in the Romance Languages. Course may be taken through UGA Studies Abroad program in Cortona, Italy and Globis in Verona, Italy.

Offered every year on a regular basis.

(RUSS) Russian

College of Arts and Sciences, Department of Germanic and Slavic Languages

RUSS 1001. Elementary Russian I. 4 hours.

Fundamentals of Russian grammar, conversation, pronunciation, and reading, with an emphasis on oral proficiency and comprehension.

Offered every year on a regular basis.

RUSS 1002. Elementary Russian II. 4 hours.

Prerequisite: RUSS 1001.

A continuation of Elementary Russian I.

Offered every year on a regular basis.

RUSS 2001. Intermediate Russian I. 3 hours.

Prerequisite: RUSS 1002.

Review of basic grammar and study of more advanced grammatical topics. Oral proficiency, comprehension, and vocabulary building are emphasized. Includes reading and discussion of various Russian texts.

Offered every year on a regular basis.

RUSS 2002. Intermediate Russian II. 3 hours.

Prerequisite: RUSS 2001.

A continuation of Intermediate Russian I.

Offered every year on a regular basis.

RUSS 2050. Modern Russian Culture. 3 hours.

Russian culture in the twentieth century. Examines both high culture (literature, art, architecture, classical music) and low or popular culture (film, popular music, various aspects of daily life) within the framework of the historical and political development of the period. No knowledge of Russian required.

Offered every even-numbered year on a regular basis.

RUSS 3000. Business Russian. 3 hours.

Prerequisite: RUSS 2002.

Further development of communicative competence and cultural knowledge with a focus on practical application in business contexts. Study of various aspects of Russian business, including business correspondence and other types of documents.

Offered every even-numbered year on a regular basis.

RUSS 3001. Russian Conversation and Composition I. 3 hours.

Prerequisite: RUSS 2002.

Development of students' abilities to express themselves accurately in spoken and written Russian and to comprehend normal Russian speech.

Offered every even-numbered year on a regular basis.

RUSS 3002. Russian Conversation and Composition II. 3 hours.

Prerequisite: RUSS 3001.

A continuation of Russian Conversation and Composition I.

Offered every odd-numbered year on a regular basis.

RUSS 3200. Russian Culture. 3 hours.

Prerequisite: RUSS 2002.

Russian culture from the period of Kievan Rus' to the 1917 Revolution. Designed to increase the student's proficiency in all language skills and to build vocabulary. Conducted in Russian.

Offered every even-numbered year on a regular basis.

RUSS 3990. Directed Study in Russian. 1-3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

Independent study and research under the direction of individual faculty members.

Non-Traditional Format: Directed study.

Offered every even-numbered year on a regular basis.

RUSS 4001. Advanced Russian Conversation and Composition. 3 hours.

Prerequisite: RUSS 3002.

Advanced language study, combining instruction in grammar, composition, and stylistics with practice in spoken Russian.

Offered spring semester; offered summer semester of even-numbered years.

RUSS 4050. Nineteenth-Century Russian Prose in English Translation. 3 hours.

Representative works of nineteenth-century Russian literature. The class is conducted in English and all readings are in English translation.

Offered every even-numbered year on a regular basis.

RUSS 4060. Twentieth-Century Russian Prose in English Translation. 3 hours.

Representative works, including authors from the Silver Age, Soviet, and post-Soviet periods. The class is conducted in English and all readings are in translation. Offered every even-numbered year on a regular basis.

RUSS 4250. Pushkin. 3 hours.

Prerequisite: RUSS 3001 or RUSS 3200.

Alexander Pushkin's major works in poetry and prose, and his role in the development of the Russian literary language. Conducted in Russian.

Offered every odd-numbered year on a regular basis.

RUSS 4260. Introduction to Nineteenth-Century Russian Literature. 3 hours.

Prerequisite: RUSS 3001 or RUSS 3200.

Representative works in the original language. Conducted in Russian.

Offered every even-numbered year on a regular basis.

RUSS 4270. Introduction to Twentieth-Century Russian Literature. 3 hours.

Prerequisite: RUSS 3001 or RUSS 3200.

Representative works in the original language. Conducted in Russian.

Offered every even-numbered year on a regular basis.

RUSS 4510. Special Topics. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: RUSS 3002 or permission of department. Seminar focusing on specific topics in Russian literature and culture or Russian and Slavic linguistics.

Offered every odd-numbered year on a regular basis.

RUSS 4960H. Directed Reading and Project (Honors). 3 hours.

Prerequisite: RUSS 3001 and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered spring semester; offered summer semester of even-numbered years.

RUSS 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: RUSS 3001 and permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study.

Offered every year on a regular basis.

RUSS 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors.

Thesis for Honors students.

Non-Traditional Format: Thesis course.

Offered every year on a regular basis.

(SEMI) Semitic

College of Arts and Sciences, Department of Religion

SEMI 4001/6001. Elementary Aramaic/Syriac. 3 hours.

Prerequisite: HEBR 2004 or permission of department. Aramaic and/or Syriac grammar, especially as related to Hebrew, along with simple readings from religious texts. Not offered on a regular basis.

(SOCL) Sociology

College of Arts and Sciences, Department of Sociology

SOCI 1101. Introductory Sociology. 3 hours.

Basic concepts, theoretical approaches, and methods of sociology, with an emphasis on culture, socialization, social organizations, and major institutions. Offered fall, spring, and summer semesters.

SOCI 1101H. Introductory Sociology (Honors). 3 hours.

Not open to students with credit in SOCI 1101.

Prerequisite: Permission of Honors.

Basic concepts, theoretical approaches, and methods of sociology, with an emphasis on culture, socialization, social organization, and major institutions. Offered fall and spring semesters.

SOCI 1600. Social Problems. 3 hours.

The causes, consequences, and social construction of American social problems, including poverty, crime and delinquency, environmental degradation, and race and ethnic relations.

Offered fall and spring semesters.

SOCI(AFAM) 2020. African American Society. 3 hours.

The class, status, and power relations of African Americans as part of both the United States social structure and the African diaspora.

Offered every year on a regular basis.

SOCI 2090. Social Change. 3 hours.

The causes, nature, and consequences of changes in social structure and institutions.

Offered every odd-numbered year on a regular basis.

(SOCI)GEOG(ANTH)(CMLT)(HIST) 2100. Introduction to Africa. 3 hours.

The history, physical environment (landforms, vegetation, and climate), and sociocultural environment (artistic, political, and social development) of Africa.

Offered fall semester.

SOCI 2400. Environmental Sociology. 3 hours.

The social causes and consequences of resource scarcity and environmental depletion. Topics include world population growth, pollution, depletion of energy sources, species extinction, and environmental movements.

Offered every year on a regular basis.

SOCI 2420. Class, Status, and Power. 3 hours.

Modern social status systems, with a focus on the United States. The use of prestige, occupational skills, and economic assets to create classes; the impact of class on life chances; and the interaction of class with race, gender, and belief systems to shape individual earnings, wealth, and power.

Offered every year on a regular basis.

SOCI 2470. Deviance and Social Control. 3 hours.

The nature, extent, and correlates of deviance and its control by social institutions and agencies; theories of deviance and societal reactions to deviance.

Offered every year on a regular basis.

SOCI 2500. Culture and Social Institutions. 3 hours.

Social institutions that are the foundation of social and cultural continuity from one generation to the next, including family and kinship, education, religion, work, and politics.

Offered every even-numbered year on a regular basis.

SOCI 2730. Social Interaction. 3 hours.

The relationship between individuals and groups, as it shapes the development of social competence, personality, self-concept, motivation, attitudes and cognition.

Offered every year on a regular basis.

SOCI 2750. Sociology of Work and Industry. 3 hours.

The structure of work and industry with an emphasis on the rise of management and the modern corporation, the growth and decline of labor unions, and the emergence of service industries.

Offered every year on a regular basis.

SOCI(AFAM) 2820. Race and Ethnicity in America. 3 hours.

The causes and consequences of race and ethnic discrimination in America, with a focus on ethnic competition and conflict.

Offered every year on a regular basis.

SOCI 2850. Sociology of Poverty. 3 hours.

The origins and social construction of poverty; theories of the origin and perpetuation of poverty.

Offered every year on a regular basis.

SOCI 3000. Sociology in Film. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Popular Hollywood films as they illustrate culture, social class, race, gender, identity, and other sociological concepts. The ideological and utopian aspects of film are emphasized.

Offered every year on a regular basis.

SOCI 3010. Sociology of Culture. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Recent trends in American culture, focusing on traditions, practices, and products, including books, music, and film. Organizing themes are culture as both a source of social integration and an arena of strife, and the reciprocal effects of culture and human agency.

Offered every year on a regular basis.

SOCI 3060. Sociology of Education. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Mainstream and critical theories of how society shapes the purposes, processes, and organization of schools; current policy issues and sources of national education data, with primary focus on United States elementary and secondary schools.

Offered every year on a regular basis.

SOCI 3070. Juvenile Delinquency. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The juvenile justice system, including the measurement of delinquency, contexts of adolescent socialization, and techniques of evaluation research.

Offered fall and spring semesters.

SOCI 3100. Sociology of Medicine. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Social factors in health and illness, with an emphasis on

United States society. Topics include the socialization of health professionals; the organization and finance of health care systems; and ethical and political issues related to health.

Offered every year on a regular basis.

SOCI 3140. Social Control of Crime. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The nature of responses to crime by victims, criminal justice agencies, and other institutions; theories explaining reactions to crime.

Offered every odd-numbered year on a regular basis.

SOCI 3150. Criminal Punishment and Society. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The relationship between society and the nature and extent of American punishment over time; theories of and justifications for punishment.

Offered every even-numbered year on a regular basis.

SOCI 3220. Development of Sociological Theory. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Pivotal sociological theorists from classic theorists such as Marx, Weber, and Durkheim to the present.

Offered every year on a regular basis.

SOCI 3230. Sociological Theory: The German Tradition. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The German theoretical tradition, beginning with Marx and continuing with Wilhelmine-era sociologists, particularly Simmel and Weber; the Weimer and Nazi periods; and postwar critical theorists, notably Habermas.

Offered on a regular basis.

SOCI 3250. Social Movements and Collective Behavior. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The origin, nature, and processes of crowd behavior and social change movements.

Offered every odd-numbered year on a regular basis.

SOCI 3270. Personality and Social Structure. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The social factors that shape behavior and self-concept; theories such as behaviorism, symbolic interactionism, Freudian psychology, cognitive social psychology, and critical approaches. Topics include emotions, human development, and authenticity and sincerity in the postmodern age.

Offered every year on a regular basis.

SOCI 3280. Sociology of Gender. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Feminist theories and methodologies on gender, with an emphasis on contemporary American society and the intersection of gender, race, and class. Topics include socialization, sexual orientation, reproduction, violence, family and household, work and global restructuring, and politics.

Offered every year on a regular basis.

SOCI(AFAM) 3300. Global Perspectives on Racism and Sexism. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Race and gender relations and discrimination around the globe; the origins and practice of race and gender domination and empowerment in the Americas, Africa, Asia, Europe, the Middle East, and the Pacific Rim.

Offered every even-numbered year on a regular basis.

SOCI(AFAM) 3310. Race and Culture. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Evolution of cultures among racial groups as part of, and in contrast to, Western civilization. Particular attention is given to the ways race and culture intersect to provide styles, practices, and patterns of living for individuals in contemporary society.

Not offered on a regular basis.

SOCI 3320. Sociology of Urban Life. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The use of urban areas by individuals and institutions. Topics include urban ecology, crime, residential segregation, and poverty.

Offered every year on a regular basis.

SOCI(POLS)(ANTH) 3450. Sociopolitical Ecology. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The relationship between humans and their environment; ecological and social theories about environmental policies and problems. Course may be taken through UGA Studies Abroad program in GLOBIS.

Offered every year on a regular basis.

SOCI 3460. Political Sociology. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Theoretical approaches to the state; the formation and legitimation of nations; collective action, social movements, and revolutions. Focus will be on issues of class, gender, and race.

Offered every even-numbered year on a regular basis.

SOCI 3500. Sociology of the Political Economy. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The balance of political power between classes, races, and nations, and how it shapes the economic forces that determine social order and the success or failure of social change.

Offered every odd-numbered year on a regular basis.

SOCI 3590. Qualitative Methods of Social Research. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Qualitative sociological analysis that emphasizes participant observation, intensive interviewing, and analysis of text; examples of field work studies; the design and completion of an independent field research project.

Offered every year on a regular basis.

SOCI 3600. Logic and Practice of Sociological Research. 3 hours.

Prerequisite: [(SOCI 1101 or SOCI 1600) and STAT 2000] or permission of department.

The basic ideas and techniques used to conduct and evaluate research. Topics include the purposes and types of social research; the logic and interpretation of bivariate and multivariate data analysis; and the use of microcomputers to analyze evidence commonly used in social research.

Offered fall and spring semesters.

(SOCI)POLS 3700. Research Methods in Criminal Justice. 2-3 hours.

Not open to students with credit in POLS 4150.

Prerequisite: POLS 1101-1101D.

Corequisite: POLS(SOCI) 3700L.

Fundamental principles of social science research and related research design. Structured to develop students' abilities to think clearly, critically, and logically about social science issues through the scientific evaluation of empirical issues and evidence.

Not offered on a regular basis.

(SOCI)POLS 3700L. Research Methods in Criminal Justice Laboratory. 1 hour. One lecture and one 1-hour lab period.

Not open to students with credit in POLS 4150L.

Corequisite: POLS(SOCI) 3700.

Fundamental principles of social science research and related research design. Structured to develop students' abilities to think clearly, critically, and logically about social science issues through the scientific evaluation of empirical issues and evidence.

Not offered on a regular basis.

SOCI 3730. Social Psychology. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The relationship between individuals and groups, as it

shapes the development of social competence, personality, self-concept, motivation, attitudes, and cognition.

Offered every odd-numbered year on a regular basis.

SOCI 3740. Sociology of Sport. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The structural and cultural relationship of sport to society; contemporary issues in sport.

Not offered on a regular basis.

SOCI 3810. Criminology. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The nature, extent, and correlates of crime; theories of criminal behavior and victimization.

Offered fall and spring semesters.

SOCI 3820. Communities and Crime. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Theory and research on urban crime and spatial variation in crime rates; the impact of crime on the structure of communities and its role in neighborhood decline.

Offered every even-numbered year on a regular basis.

SOCI 3830. Violence and Society. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Theory and research on the relationship between criminal violence and social structure and processes.

Offered every odd-numbered year on a regular basis.

SOCI 3850. Sociology of Occupations. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Major processes including occupational choice, socialization, careers, and professionalization; contemporary issues concerning women and work, minorities and work, the consequences of bureaucratic and technological changes, and the impact of work on non-work behavior.

Offered every odd-numbered year on a regular basis.

SOCI 3860. Sociology of Alcohol and Drug Use. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Sociohistorical analysis of cultural and policy changes regarding alcohol and psychoactive drugs; theoretical approaches to defining abuse and addiction; causes of substance abuse; treatment strategies, especially Alcoholics Anonymous; and intervention strategies, especially those based in the workplace.

Offered every odd-numbered year on a regular basis.

SOCI 3950. Sociology of Organizations. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Sociology

Research and theories emphasizing organizational structures and cultures; bureaucracies and their alternatives; the control of workers; and the role of gender in organizations.

Offered every even-numbered year on a regular basis.

SOCI 4010. Seminar in Culture. 3 hours.

Prerequisite: SOCI 3010 or permission of department.

Special topics in culture for advanced undergraduates.

Offered every even-numbered year on a regular basis.

SOCI 4240/6240. Sociology of War and the Military. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

War as a phenomenon with social causes and consequences; the military as an occupation and organization. Topics include conscription; the historical experiences of women and minorities in the military; and war as a source of collective memory for generations, ethnic groups, and nations.

Offered on a regular basis.

SOCI 4260. Seminar in Sociological Theory. 3 hours.

Repeatable for maximum 9 hours credit.

Prerequisite: SOCI 3220 or permission of department.

Selected topics in classic and contemporary theory for advanced undergraduates.

Not offered on a regular basis.

SOCI 4270. Gender and Work. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Research and theories on the role of gender in shaping labor market opportunities, experiences, and rewards; remedies for enduring problems, including those applied in United States workplaces; and new research directions.

Offered every odd-numbered year on a regular basis.

SOCI 4280. Global Perspectives on Gender. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The diverse social and cultural manifestations of gender located within an economic, social, and political context. Case studies drawn from Africa, Asia, the Middle East, Latin America, and the Caribbean.

Not offered on a regular basis.

SOCI 4350. Seminar in Work and Occupations. 3 hours.

Prerequisite: SOCI 2750 or SOCI 3850 or SOCI 3950 or permission of department.

The organization of work and occupational processes, such as the emergence of temporary and contract work, the decline of manufacturing jobs and the rise of the service sector, and the impact of technology on the structure of work and the experiences of workers.

Not offered on a regular basis.

SOCI(AFAM) 4370. Seminar in Race and Ethnicity. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

Special topics in race and ethnicity for advanced undergraduates.

Not offered on a regular basis.

SOCI 4470. Seminar in Deviance and Social Control. 3 hours.

Prerequisite: [SOCI 1101 or SOCI 1600] and SOCI 2470.

Special topics in deviance and responses to deviance, with an emphasis on theoretical perspectives.

Not offered on a regular basis.

(SOCI)CHFD 4610/6610. The Family. 3 hours.

Prerequisite: Undergraduate level only: CHFD 2100.

Family study utilizing data from the fields of anthropology, individual and social psychology, history, sociology, economics, and psychiatry.

Not offered on a regular basis.

SOCI 4650/6650. Sociology of Aging. 3 hours.

Prerequisite: SOCI 1101 or SOCI 1600 or permission of department.

The status, roles, and demographic aspects of the aging population and its relationship with social institutions.

Offered every year on a regular basis.

SOCI 4730. Seminar in Social Psychology. 3 hours.

Prerequisite: SOCI 3270 or SOCI 3730 or permission of department.

Special topics in social psychology for advanced undergraduates.

Not offered on a regular basis.

SOCI 4830. Sociology of Law. 3 hours.

Prerequisite: (SOCI 1101 or SOCI 1600) and SOCI 2470.

The nature of law, and the ways the legal system reflects its broader social context.

Offered every year on a regular basis.

SOCI 4900. Supervised Research in Sociology.

3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Research conducted under the direction of a faculty member; includes a review of the literature, data collection and analysis, and interpretation of research findings.

Non-Traditional Format: Weekly meetings arranged between instructor and student.

Offered fall and spring semesters.

SOCI 4960H. Supervised Research in Sociology (Honors). 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Research conducted under the direction of a faculty member, including a review of the literature, data collection and analysis, and interpretation of research findings.

Non-Traditional Format: Weekly meetings arranged between instructor and student.
Offered fall and spring semesters.

(SOCI)POLS 5500. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Centers on regular and systematic analysis of experimental learning under direct faculty supervision.

Non-Traditional Format: Student works independently and meets with project director several times during the semester to monitor progress and discuss requirements for written paper.

Not offered on a regular basis.

(SOCI)POLS 5510. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Centers on the design, execution, and reporting of original research related to the specific placement or internship.

Non-Traditional Format: Internship.

Not offered on a regular basis.

(SOCI)POLS 5520. Criminal Justice Internship. 3 hours.

Prerequisite: POLS 1101-1101D.

An internship specifically designed for and required of students pursuing a degree in criminal justice. Criminal justice students are required to intern in an approved agency full time over the semester.

Non-Traditional Format: Internship.

Not offered on a regular basis.

(SOWK) Social Work

School of Social Work

SOWK 2101. The Social Welfare Institution. 3 hours.

Not open to students with credit in SOWK 2107H.

History and current status of social welfare programs and services in the United States. Philosophical, religious, economic, and political perspectives on social welfare. A comparison of approaches to social welfare in the United States and other developed nations.

Offered fall and spring semesters.

SOWK 2107H. The Social Welfare Institution (Honors). 3 hours. 4-hour lab period.

Not open to students with credit in SOWK 2101.

Prerequisite: Permission of Honors.

History and current status of social welfare programs and services in the United States. Philosophical, religious, economic, and political perspectives on social welfare. A comparison of approaches to social welfare in the United States and other developed nations.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing, and discussion

skills, and which require extensive work out of class, will be the primary delivery method.

Offered fall and spring semesters.

SOWK 2154. The Profession of Social Work. 4 hours. Three lectures and one 1-hour lab period.

History and current status of the profession of social work. The role of the social worker in various fields of practice. The profession's commitment to social and economic justice for vulnerable and oppressed populations. The person-in-environment perspective. Communication and interviewing skills lab.

Offered fall and spring semesters.

SOWK 5326. Foundations of Social Work Research. 3 hours. One 1.5-hour lab period.

Prerequisite: SOWK 5524.

Corequisite: SOWK 5534 and SOWK 5757 and SOWK 5835.

Basic principles of social science research based on the scientific method. Analytical and evaluative methods of knowledge building and application in social work and social welfare settings. Empirically based practice and the evaluation of the individual social worker's own practice interventions.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing, and discussion skills, and which require extensive work out of class, will be used.

Offered fall semester.

SOWK 5524. General Practice of Social Work I. 8 hours. Four lectures and four 1-hour lab periods.

Prerequisite: SOWK 2101 and SOWK 2154.

Theory and practice of generalist social work. Knowledge, skills, and ethical principles needed for beginning social work practice. Problem identification, assessment, intervention, and evaluation of practice with individuals from a person-in-environment perspective. Lab emphasizes application of theory to cases involving individuals as clients.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing and discussion skills, and which require extensive work out of class, will be used.

Offered summer semester.

SOWK 5534. General Practice of Social Work II. 3 hours. One 1.5-hour lab period

Prerequisite: SOWK 5524.

Corequisite: SOWK 5326 and SOWK 5757 and SOWK 5835.

A continuation of General Practice of Social Work I. Generalist practice principles applied to groups, organizations, and communities. Lab will emphasize application of theory to group and organizational settings and use of management information technology in social work practice.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing and discussion

Social Work / Spanish

skills, and which require extensive work out of class, will be used.
Offered fall semester.

SOWK 5544. General Practice of Social Work III. 3 hours. 1.5-hour lab period.

Prerequisite: SOWK 5534.

Corequisite: SOWK 5701 and SOWK 5767 and SOWK 5845.

A continuation of General Practice of Social Work II. Generalist practice principles applied to various family types. Issues related to gender, race, ethnicity, sexual orientation, and age as they affect family functioning over time and in community contexts. Lab will emphasize application of theory regarding family centered practice to cases.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing and discussion skills, and which require extensive work out of class, will be used.

Offered spring semester.

SOWK 5701. Social Welfare Policy and Services. 3 hours. One 1.5-hour lab period.

Prerequisite: SOWK 5524.

Corequisite: SOWK 5544 and SOWK 5767 and SOWK 5845.

Social insurance, public assistance, and social service programs in the United States. Social welfare within a capitalist economy and an individualistic, democratic society. The influences of American economics and politics on social services and social work practice. Introduction to models of policy analysis.

Non-Traditional Format: Learning teams, which promote critical thinking, research, writing and discussion skills, and which require extensive work out of class, will be used.

Offered spring semester.

SOWK 5757. Current Issues in Social Work I. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: SOWK 5524.

Corequisite: SOWK 5326 and SOWK 5534 and SOWK 5835.

Current problems and issues in social work and social welfare specifically drawn from interests and experiences of students enrolled.

Offered fall semester.

SOWK 5767. Current Issues in Social Work II. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: SOWK 5534.

Corequisite: SOWK 5544 and SOWK 5701 and SOWK 5845.

A continuation of Current Issues in Social Work I.

Offered spring semester.

SOWK 5835. Practicum in Social Work I. 5 hours.

Prerequisite: SOWK 5524.

Corequisite: SOWK 5326 and SOWK 5534 and SOWK 5757.

A minimum of twenty hours per week of supervised social work practice in a social agency.

Non-Traditional Format: Practicum. Twenty hours per week under supervision in an approved social agency. Offered fall semester.

SOWK 5845. Practicum in Social Work II. 5 hours.

Prerequisite: SOWK 5534.

Corequisite: SOWK 5544 and SOWK 5701 and SOWK 5767.

A continuation of Practicum in Social Work I.

Non-Traditional Format: Twenty hours per week under supervision in an approved social agency.

Offered spring semester.

SOWK 5908. Directed Readings in Social Work.

1-9 hours. Repeatable for maximum 9 hours credit.

Individual study, reading, or projects under the direction of a faculty member.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

SOWK 5908H. Directed Readings in Social Work (Honors). 1-9 hours. Repeatable for maximum 9 hours credit.

Not open to students with credit in SOWK 5908.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a faculty member.

Non-Traditional Format: Directed study.

Not offered on a regular basis.

SOWK 5998H. Honors Thesis. 1-9 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of Honors.

Individual research under the direction of a faculty member.

Non-Traditional Format: Thesis.

Not offered on a regular basis.

(SPAN) Spanish

College of Arts and Sciences, Department of Romance Languages

Certain courses in Spanish are not open to native speakers. A native speaker is defined as a person who graduated from a secondary school in which the language of instruction was Spanish.

SPAN 1001. Elementary Spanish. 4 hours.

Not open to students with credit in SPAN 1002.

Open only to students who have had fewer than two years of high school Spanish. Emphasis on conversational Spanish. Development of listening comprehension, speaking, reading, and writing skills. Fundamentals of Spanish grammar and pronunciation. Introduction to Spanish-speaking cultures. Work in the language laboratory. Given in Spanish.

Offered fall, spring, and summer semesters.

SPAN 1002. Elementary Spanish. 4 hours.

Not open to students with credit in SPAN 1110.

Prerequisite: SPAN 1001.

A continuation of Elementary Spanish. Emphasis on conversational Spanish. Development of listening comprehension, speaking, reading, and writing skills. Fundamentals of Spanish grammar and pronunciation. Study of Spanish-speaking cultures. Work in the language laboratory. Given in Spanish. Offered fall, spring, and summer semesters.

SPAN 1110. Accelerated Elementary Spanish. 4 hours.

Not open to students with credit in SPAN 1001 or SPAN 1002.

Accelerated course reviewing basic principles of the Spanish language for students with some background of high school Spanish. Given in Spanish. Offered every year on a regular basis.

SPAN 2001. Intermediate Spanish. 3 hours.

Not open to students with credit in SPAN 2002.

Prerequisite: SPAN 1002 or SPAN 1110 or permission of department.

Content-based review of Spanish grammar and systematic vocabulary and skill development. Integration of language, culture, and literature. Given in Spanish. Offered fall, spring, and summer semesters.

SPAN 2002. Intermediate Spanish. 3 hours.

Not open to students with credit in SPAN 2120H or SPAN 3010.

Prerequisite: SPAN 2001 or permission of department.

A continuation of Intermediate Spanish. Content-based review of Spanish grammar and systematic vocabulary and skill development. Integration of language, culture, and literature. Given in Spanish. Offered fall, spring, and summer semesters.

SPAN 2120H. Accelerated Intermediate Spanish (Honors). 3 hours.

Not open to students with credit in SPAN 2001 or SPAN 2002.

Prerequisite: SPAN 1002 and permission of Honors.

Covers materials studied in Intermediate Spanish. Emphasis on advanced readings and grammar review. Also prepares students to enter Spanish Conversation and Composition. Given in Spanish. Offered every year on a regular basis.

SPAN 2500. Spanish for Reading Knowledge. 3 hours.

Grammar, idioms, and vocabulary; practice in translating moderately difficult technical and non-technical Spanish. Intended to assist graduate students to satisfy reading knowledge requirement, but does not carry graduate credit; not to be used to satisfy the undergraduate language requirement; not open to Spanish majors. Given in English.

Offered every year on a regular basis.

SPAN 2550. Latino Literature, Language, and Culture. 3 hours.

Not open to students with credit in ROML 2550.

The literary, socio-linguistic, and cultural presence of representative Hispanic groups in the United States. Intended for Spanish speakers. Given in Spanish. Offered every year on a regular basis.

SPAN 2950. Study Abroad in Spanish. 3 hours.

Prerequisite: Permission of department.

Spanish language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

SPAN 2960. Study Abroad in Spanish. 3 hours.

Prerequisite: Permission of department.

Spanish language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

SPAN 2970. Study Abroad in Spanish. 3 hours.

Prerequisite: Permission of department.

Spanish language, literature, and culture courses taught at study abroad programs of the University System of Georgia and non-University of Georgia programs. Course may be taken through UGA Studies Abroad program in programs approved by department. Offered summer semester.

SPAN 3010. Spanish Conversation and Composition. 3 hours.

Not open to students with credit in SPAN 3030.

Prerequisite: SPAN 2002 or SPAN 2120H or permission of department.

Primary emphasis is divided between conversation and composition skills. The two phases of the course are correlated to include the skills of reading and listening comprehension. Given in Spanish. Not open to native speakers. Offered fall and spring semesters.

SPAN 3010H. Spanish Conversation and Composition (Honors). 3 hours.

Not open to students with credit in SPAN 3010.

Prerequisite: SPAN 2002 and permission of Honors. Practice in composition and conversation skills in Spanish. Emphasis is divided equally between composition and conversation. Not open to native speakers. Given in Spanish.

Offered every year on a regular basis.

Spanish

SPAN 3030. Introduction to Literature. 3 hours.

Not open to students with credit in SPAN 3030H.

Prerequisite: SPAN 3010.

Critical reading and interpretation of Spanish and Spanish-American literature through the study of representative texts in the various genres. Basic vocabulary and techniques of literary analysis and criticism. Given in Spanish.

Offered fall and spring semesters.

SPAN 3030H. Introduction to Literature (Honors). 3 hours.

Not open to students with credit in SPAN 3030.

Prerequisite: SPAN 2120H and permission of Honors. Critical reading and interpretation of Spanish and Spanish-American literature through the study of representative texts in the various genres. Basic vocabulary and techniques of literary analysis and criticism. May be substituted by Spanish majors or minors for Introduction to Literature. Given in Spanish.

Offered every year on a regular basis.

SPAN(LING) 3050. Introduction to Spanish Linguistics. 3 hours.

Prerequisite: SPAN 3010.

Fundamentals of language in general and Spanish in particular. Linguistic knowledge, language variation, and language contact phenomena. Representative Spanish sound systems, syllabic structure, sentence patterns, structure and meaning of words. Analysis of data from oral and written registers. Given in Spanish.

Offered fall and spring semesters.

SPAN 4010. Advanced Conversation and Composition. 3 hours.

Prerequisite: SPAN 3010.

Practice in composition and conversation skills in Spanish, beyond Spanish Conversation and Composition. Emphasis is divided equally between composition and conversation. Given in Spanish. Not open to native speakers.

Offered every year on a regular basis.

SPAN 4040. Spanish Literature and Culture from the Middle Ages through the Baroque. 3 hours.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Major works, literary movements, and cultural background of Spanish literature from the Middle Ages to the end of the seventeenth century. Texts will include examples of poetry, prose, and drama. Given in Spanish.

Offered every year on a regular basis.

SPAN 4050. Spanish Literature and Culture from the Enlightenment through the Present. 3 hours.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Major works, literary movements, and cultural background of Spanish literature from 1700 to the present. Texts will include examples of poetry, prose, and drama. Given in Spanish.

Offered every year on a regular basis.

SPAN 4060. Spanish-American Literature and Culture from the Colonial Period through the Independence Period. 3 hours.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Major works, literary movements, and cultural background of Spanish-American literature from the Colonial period through Independence. Texts will include examples of poetry, prose, and drama. Given in Spanish.

Offered every year on a regular basis.

SPAN 4070. Spanish-American Literature and Culture from Modernism through the Present. 3 hours.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Intensive reading and analysis of significant writers and the literary movements of which they are representative. Given in Spanish.

Offered every year on a regular basis.

SPAN 4080. Studies in Spanish Literature and Culture. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Specific areas of major importance in the cultural and literary developments in Spain and Spanish America. The approach will contextualize relevant literary examples within historical, philosophical, linguistic, political, and ideological issues. Given in Spanish.

Offered every year on a regular basis.

SPAN 4120/6120. Topics in Spanish Culture, Language, and Literature. 3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: SPAN 3030 and SPAN(LING) 3050.

Selected topics in Hispanic culture, civilization, language, linguistics, literature, or literary theory. Given in Spanish.

Offered every year on a regular basis.

SPAN 4150. Business Spanish. 3 hours.

Prerequisite: SPAN 3010 and (SPAN 3030 or SPAN(LING) 3050 or ACCT 2101). Business students check with advisor for prerequisites.

Commercial Spanish and the environment of the Spanish-speaking business world. Business vocabulary, basic business and cultural concepts, and situational practice. Topics include economic geography of Spanish-speaking countries, company organization, management, banking, investment, personnel, office systems, goods and services, marketing, and letter writing. Given in Spanish.

Offered every year on a regular basis.

SPAN(LING) 4650. Spanish Phonetics and Language Variation. 3 hours.

Prerequisite: SPAN(LING) 3050.

Speech organs and systematic description of Spanish sounds. Comparison of English and Spanish patterns of stress, pronunciation, and intonation. Examination of recurrent pronunciation errors. Description of major geographical and social dialects. Practice in pronunciation and transcription of sounds. Given in Spanish.

Offered every year on a regular basis.

SPAN 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, readings, or projects under the supervision of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

SPAN 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, readings, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

SPAN 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors and junior or senior standing.

Individual study, readings, or projects under the guidance of a project director.

Non-Traditional Format: Directed study.

Offered on a regular basis.

SPAN 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors and senior standing.

Individual research in the major field or in a closely related field.

Non-Traditional Format: Students will meet with faculty members on a regular basis.

Offered on a regular basis.

(SPCM) Speech Communication

College of Arts and Sciences, Department of Speech Communication

SPCM 1010. Communication in Human Society. 3 hours.

The role of speech in the constitution of human beings and their interrelationships. Exploration of the general character of speech as communication and its variations in public, group, and interpersonal settings.

Offered fall and spring semesters.

SPCM 1100. Introduction to Public Speaking. 3 hours.

The fundamental principles and practices of public speaking, including systematic library research, creative analysis and synthesis of topics, organization, language, delivery, audience adaptation, reasoning, arguments, and supporting materials.

Offered fall, spring, and summer semesters.

SPCM 1500. Introduction to Interpersonal Communication. 3 hours.

Communication as it occurs in two-person and small group settings. Primary concern is given to understanding how an individual can use verbal and nonverbal communication to improve relationships and derive maximum social rewards.

Offered fall, spring, and summer semesters.

SPCM 1800. Cultural Diversity in Communication. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in SPCM 4800.

Patterns of public and interpersonal communication among and between ethnic groups, especially North American minority cultures, strategies for fostering group identity, difficulties in inter-group communication, and skills for improving the quality of those interactions.

Offered spring semester.

SPCM 2100. Advanced Public Communication. 3 hours.

Prerequisite: SPCM 1100 or permission of department. Advanced practice in varied public communication contexts such as community presentations, press conferences, media interviews, and persuasive speaking to hostile audiences. In addition to developing platform speaking skills, emphasis is placed on interactional skills and providing communication assistance to organizations and individuals.

Offered fall semester.

SPCM 2150H. Perspective on Public Communication (Honors). 3 hours.

Not open to students with credit in SPCM 1100.

Prerequisite: Permission of Honors.

Practice in delivery and criticism of speeches, employing models from great speakers and speeches in history.

Offered spring semester.

SPCM 2300. Business and Professional Communication. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in MGMT (SPCM) 5960.

The principles and skills for making effective business presentations. Students will learn to manage communication in a variety of professional and organizational contexts. Emphasis is on clarity and persuasiveness in communicating with clients, associates, and other decision-makers.

Offered every year on a regular basis

SPCM 2400. Oral Decision Making. 3 hours

The theory and practice of democratic decision making, from researching a topic systematically in specialized library sources to reaching a workable solution through group discussion. Second phase will involve theory and practice of debating and implementing decisions through parliamentary procedure

Not offered on a regular basis

Speech Communication

SPCM2510. Introduction to Small Group Communication. 3 hours.

Not open to students with credit in SPCM 4510.

Emphasizes student involvement in groups working on socially significant projects of their own choice. Examines factors which affect quality of communication and group outcomes; interpersonal and task behaviors, leadership, norms, conflict resolution, and creativity. Offered fall, spring, and summer semesters.

SPCM2520. Introduction to Interviewing. 3 hours.

Not open to students with credit in MGMT (SPCM) 5870.

Information gathering, problem solving, and persuasive communication skills in dyadic settings. Survey, journalistic, job seeking, and employee appraisal interview forms. Students gain experience conducting interviews across a variety of situations.

Offered every year on a regular basis.

SPCM 2550H. Perspective on Interpersonal Communication (Honors). 3 hours.

Not open to students with credit in SPCM 1500.

Prerequisite: Permission of Honors.

Through lectures and class discussion, students will critically examine theory and research in interpersonal communication. Emphasis is placed both on learning about the communication process and on becoming a more effective participant in it.

Offered every year on a regular basis.

SPCM(AFAM) 2810. Communication in African American Communities. 3 hours.

Not open to students with credit in SPCM (AFAM) 4810.

Rhetorical strategies and patterns of orality in African American communication, communication styles in conflict, and skill development for cultural interaction. Offered spring semester.

SPCM 3300. Introduction to Rhetorical Criticism. 3 hours.

Prerequisite: SPCM 1010 or SPCM 1100 or SPCM 1500.

Rhetorical approaches to the criticism of public communication. Intensive practice in writing rhetorical analyses will be provided.

Offered fall, spring, and summer semesters.

SPCM 3310. Case Studies in Public Communication. 3 hours. Repeatable for maximum 6 hours credit. Three 2-hour lab periods.

Application of rhetorical theory and criticism to one or more case studies, ranging from recurring persuasive strategies in the Lincoln-Douglas debates of 1858, to the role, function, and impact of public discourse in the Montgomery boycott of the 1950s.

Not offered on a regular basis.

SPCM3500. Interpersonal Communication Theory 3 hours.

Prerequisite: SPCM 1010 or SPCM 1100 or SPCM 1500.

Major theories of human communication, with special emphasis upon interpersonal communication. The role, function, and assumptions of theoretical approaches will be discussed.

Not offered on a regular basis.

SPCM3700. Empirical Research Methods In Communication. 3 hours.

Prerequisite: STAT 2000 and (SPCM 1010 or SPCM 1100 or SPCM 1500).

Social science research methods in interpersonal communication. Covers formalizing research questions, conceptual and operational definitions, hypothesis testing, measurement, sampling, research design, and computer analysis.

Offered fall and spring semesters.

SPCM 4200. Introduction to Rhetorical Theory. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

Rhetorical theory in classical, modern, and contemporary times.

Offered fall semester.

SPCM 4210. Classical Rhetoric. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

The theory and practice of rhetoric in the classical period. The course focuses principally upon Plato, Aristotle, Cicero, and Augustine.

Not offered on a regular basis.

SPCM 4220. Theories of Argumentation. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

Process by which people give reason to justify their acts, beliefs, attitudes, and values and to influence the thought and action of others. Traditional and contemporary theories of argumentation and critical analysis of public argument.

Offered spring semester of odd-numbered years.

SPCM 4310/6310. Communication Strategies in Government. 3 hours.

Prerequisite: SPCM 3300 or permission of department.

Communication strategies and activities in the executive and legislative branches of local, state, and national government. Case study approach incorporated into the class.

Offered fall semester of even-numbered years.

SPCM 4320. Communication Strategies in Political Campaigns. 3 hours.

The role communication plays in deciding which candidate will run for office, the nomination of candidates, and the election of candidates to office.

Offered fall, spring, and summer semesters of even-numbered years; offered fall semester of odd-numbered years.

SPCM 4330. Communication Strategies in the Courtroom. 3 hours.

Prerequisite: SPCM 3300.

How verbal communication skills and strategies of persuasion are used in a variety of legal settings. Includes interviewing, courtroom speeches, witness examination, jury selection and deliberation, as well as issues of judicial argumentation and reasoning and effects of media on litigation outcomes. Not offered on a regular basis.

SPCM 4340/6340. Communication and Religion. 3 hours.

The nature and practice of communication in a variety of religious traditions. Notions of sacred symbolism, myth, revelation, hermeneutics, and apologetics are especially emphasized. Offered on a regular basis.

SPCM 4360. Communication Strategies in Social Movements. 3 hours.

Prerequisite: SPCM 3300.

The rhetorical nature, function, development, and impact of social movements as applied to one or more case studies. Not offered on a regular basis.

SPCM 4370/6370. Women and United States Public Discourse. 3 hours.

Prerequisite: SPCM 3300 or permission of department. History and criticism of speeches by United States women in nineteenth- and twentieth-century social reform movements, especially woman's rights and feminism. Offered every year on a regular basis.

SPCM 4500. Advanced Interpersonal Communication. 3 hours.

Prerequisite: SPCM 3700.

Communication in personal relationships from periods of relational development through relational disengagement. Emphasis on understanding and applying social scientific theories of communication. Offered every year on a regular basis.

SPCM 4510. Nonverbal Communication. 3 hours.

The functional potential of each type of nonverbal communication. Primary emphasis is given to demonstrating the value of specific kinds of nonverbal cues in communicating successfully in such real world settings as the job interview, male-female interaction, and the courtroom. Offered every year on a regular basis.

SPCM 4530. Advanced Small Group Communication. 3 hours.

Prerequisite: SPCM 3700.

Theory and techniques of small group discussion, with emphasis on current experimentation and research. Course content includes the ways in which communication influences and is influenced by group formation,

development of group norms, group performance, and other topics.

Offered spring semester.

SPCM(HPRB) 4610/6610. Health Communication. 3 hours.

Communication about health with physicians and other providers, within support groups and health care organizations, and by public figures, groups, and organizations.

Offered fall semester.

SPCM 4800. Intercultural Communication. 3 hours.

Prerequisite: SPCM 3700 or permission of department. Factors that facilitate or impede effective communication between members of different cultural groups. Considers interactions between people from different nations as well as co-cultures within the same nation. Effects of differing world-views, value systems, language varieties, nonverbal codes, and relational norms. Skills for disseminating ideas across cultures and for building intercultural competence. Offered spring semester.

SPCM(AFAM) 4810. African American Rhetoric and Communication. 3 hours.

The history and criticism of the communication of African American speakers, with emphasis upon oral rhetoric relating to social-political development since 1860.

Offered fall semester of odd-numbered years.

SPCM 4900. Special Topics in Communication. 3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: SPCM 3300 and SPCM 3700.

Selected and rotating topics such as humor and communication, visual communication, or communication training in business and industry.

Not offered on a regular basis.

SPCM 4910. Internship in Communication. 3 hours.

Prerequisite: [(SPCM 1010 or SPCM 1100 or SPCM 1500) and (SPCM 3300 and SPCM 3700)] or permission of department.

Communication theory and research to public or private sector enterprise. Emphasis on observation and analysis of communication behaviors in workplace contexts. Non-Traditional Format: Field-based internship.

Offered fall, spring, and summer semesters.

SPCM 4920. Debate Practicum. 1-3 hours. Repeatable for maximum 6 hours credit. One 3-hour lab period

Prerequisite: Permission of department.

Concentration on the practice of intercollegiate debate. Open to students who travel to debate tournaments. Non-Traditional Format: Practicum.

Offered fall, spring, and summer semesters.

SPCM 4930. Directed Study in Communication. 3 hours.

Prerequisite: SPCM 3300 and SPCM 3700.

Independent, intensive, and extended research conducted under the supervision of a faculty member.

Non-Traditional Format: Individual student/professor interaction.

Offered fall, spring, and summer semesters.

(SPED) Special Education

College of Education, Department of Special Education

SPED 2000. Survey of Special Education. 3 hours.

Prerequisite: Permission of department.

Corequisite: SPED 2000L only for Special Education.

Individuals with special needs, including possible impact, causes, and characteristics of specific needs across life spans and cultural diversity. Topics include legal requirements, ethical implications, education strategies, collaboration between regular and special educators, inclusion, family involvement, and current issues relating to individuals with special needs.

Offered fall, spring, and summer semesters.

SPED 2000L. Survey of Special Education Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: SPED 2000.

Students examine a variety of settings which provide services to individuals with disabilities to gain an overview of the issues of exceptionality in society. Private transportation will be necessary.

Offered fall semester.

SPED 3030. Introduction to Assessing Individuals with Disabilities. 3 hours.

Prerequisite: SPED 2000 and permission of department.

Corequisite: SPED 3030L.

Educational and adaptive behavior assessment of individuals with disabilities. Basic measurement concepts and procedures for administering standardized, informal, and curriculum-based tests.

Offered on a regular basis.

SPED 3030L. Introduction to Assessing Individuals with Disabilities Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: SPED 3030.

Laboratory to be taken with Introduction to Assessing Individuals with Disabilities.

Offered on a regular basis.

SPED 3040. Introduction to Individuals with Special Needs. 4 hours.

Prerequisite: SPED 2000 and permission of department.

The characteristics of individuals with special needs, including mental retardation, behavior disorders, and

learning disabilities. Emphasis is on school-related issues, such as the eligibility and placement of students in appropriate programs, including the development of individualized education programs; and life-long adjustment problems.

Offered on a regular basis.

SPED 3050. Classroom and Behavior Management for Individuals with Disabilities. 3 hours.

Prerequisite: Permission of department.

Corequisite: SPED 3050L.

Classroom and behavior management program design based on the principles and procedures of applied behavior analysis. Emphasis is on proactive strategies that promote learning and prosocial behavior.

Offered on a regular basis.

SPED 3050L. Classroom and Behavior Management for Individuals with Disabilities Laboratory. 1 hour.

One lab period of 1-5 hours per week.

Prerequisite: Permission of department.

Corequisite: SPED 3050.

Laboratory to be taken with Classroom and Behavior Management for Individuals with Disabilities.

Offered on a regular basis.

SPED 4000/6000. Directed Study in Special Education. 1-10 hours. Repeatable for maximum 10 hours credit.

Prerequisite: Permission of department.

Specialized training appropriate to the needs of selected individuals.

Non-Traditional Format: Directed study.

Offered on a regular basis.

SPED 4040. Special Education Technology. 3 hours.

Prerequisite: SPED 2000 and permission of department.

Corequisite: SPED 4040L.

Technology for managing, assessing, and teaching across multiple computer operating systems. The use of assistive technology devices that allow access to computers for those individuals with physical challenges. Multicultural issues relating to technology access will be addressed in readings, lecture, and practicum experiences.

Offered on a regular basis.

SPED 4040L. Special Education Technology Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: SPED 2000 and permission of department.

Corequisite: SPED 4040.

Laboratory to be taken with Special Education Technology.

Offered on a regular basis.

SPED 4100. Instruction of Individuals with Mild Disabilities. 3 hours.

Prerequisite: SPED 2000 and SPED 3040 and permission of department.

Corequisite: SPED 4100L.

The practical application of research-based instructional methods for students with high incidence disabilities.

Offered on a regular basis.

SPED 4100L. Instruction of Individuals with Mild Disabilities Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: SPED 4100.

Laboratory to be taken with Instruction of Individuals with Mild Disabilities.

Offered on a regular basis.

SPED 4120. Instruction of Individuals with Moderate to Severe Disabilities. 3 hours.

Prerequisite: Permission of department.

Corequisite: SPED 4120L.

Preferred practices for teaching individuals with moderate to severe disabilities. Emphasis of curricula, curriculum-based assessment, interventions, diversity, collaboration, instructional planning, and curriculum adaptations.

Offered on a regular basis.

SPED 4120L. Instruction of Individuals with Moderate to Severe Disabilities Laboratory. 1 hour. One 1-hour lab period.

Prerequisite: Permission of department.

Corequisite: SPED 4120.

Laboratory to be taken with Instruction of Individuals with Moderate to Severe Disabilities.

Offered on a regular basis.

SPED(EDEC) 5100. Introduction to Early Childhood Special Education. 3 hours.

Prerequisite: Permission of department.

Meeting individual needs of children with disabilities in early childhood education environments. Emphases on methods for including young children with disabilities in typical environments. Topics include history and rationale for ECSE, family focused intervention, methods for teaming, embedding developmentally appropriate objectives in natural contexts.

Offered on a regular basis.

SPED 5400. Collaboration Among Families and Professionals. 3 hours.

Prerequisite: Permission of department.

Models for collaborating with families of individuals with disabilities and other professionals and paraprofessionals. Emphasis on family systems, teaming, consultation, and diversity.

Offered on a regular basis.

SPED 5450. Student Teaching Seminar. 2 hours.

Prerequisite: Permission of department.

Corequisite: SPED 5460.

Discussion of student teaching experiences and current topics.

Offered on a regular basis.

SPED 5460. Student Teaching in Special Education. 10 hours.

Prerequisite: Permission of department.

Corequisite: SPED 5450.

Supervised full-time field experience in teaching individuals with mild disabilities.

Non-Traditional Format: Field-based student teaching in schools.

Offered on a regular basis.

(STAT) Statistics

College of Arts and Sciences, Department of Statistics

STAT 2000. Elementary Statistics. 4 hours. Two lectures and two 2-hour lab periods.

Not open to students with credit in STAT 2100H, STAT 2210, or MSIT 3000.

Statistics at a level which assumes knowledge of high school algebra. Descriptive statistics, random variables, probability distributions, sampling distributions, confidence interval estimation and hypothesis testing. Simple linear regression and correlation.

Offered fall, spring, and summer semesters.

STAT 2100H. Introduction to Statistics and Computing (Honors). 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in STAT 2000, STAT 2210, or MSIT 3000.

Prerequisite: Permission of Honors.

Sampling theory including sample survey design; descriptive statistics; statistical distributions and their uses; estimation; introductory statistical inference including z-test and t-test for one sample (hypothesis testing); analysis of differences in two means; simple linear regression and correlation; goodness of fit tests and contingency tables.

Offered fall and spring semesters.

STAT 2210. Introduction to Statistics and Computing. 4 hours. Three lectures and one 2-hour lab period.

Not open to students with credit in STAT 2100H, STAT 2000, or MSIT 3000.

Sampling theory including sample survey design; descriptive statistics; statistical distributions and their uses; estimation; introductory statistical inference including z-test and t-test for one sample (hypothesis testing); analysis of differences in two means; simple linear regression and correlation; goodness of fit tests and contingency tables.

Offered fall and spring semesters

Statistics

STAT 4100/6100. Applied Stochastic Processes. 3 hours.

Not open to students with credit in STAT 4720/6720 or STAT 8700.

Prerequisite: MATH 2500.

Stochastic processes including discrete, continuous and conditional probability concepts. Definitions and properties of stochastic processes. Markov processes and chains, basic properties, transition matrices and steady state properties. Reliability renewal and queueing processes, expected waiting times, single and multiserver queues.

Offered fall semester of odd-numbered years.

STAT 4110. Applied Statistics. 3 hours.

Not open to students with credit in STAT 4110H or STAT 4210.

Prerequisite: STAT 2210.

Analysis of variance including completely randomized design, randomized block design, factorial designs, and interaction; regression analysis including linear regression and multiple regression, model checking and analysis of residuals, and model building; nonparametric statistics; power of a test. Computer application by use of a statistical package with programming capabilities. Offered spring semester.

STAT 4110H. Honors Applied Statistics. 3 hours.

Not open to students with credit in STAT 4110 or STAT 4210.

Prerequisite: STAT 2100H.

Analysis of variance including completely randomized design, randomized block design, factorial designs, and interaction; regression analysis including linear regression and multiple regression, model checking and analysis of residuals, and model building; nonparametric statistics; power of a test. Computer application by use of a statistical package with programming capabilities. Major project required.

Offered spring semester.

STAT 4210. Statistical Methods. 3 hours.

Not open to students with credit in STAT 4110H or STAT 4110.

Prerequisite: STAT 2000.

Statistical distributions; one- and two-population tests about means, including t-tests and paired-difference tests; one- and two-population tests about the variance; contingency tables and goodness-of-fit tests; non-parametric tests; analysis of variance and simple experimental designs; linear regression and residual diagnostics.

Offered fall, spring, and summer semesters.

STAT 4220. Applied Experimental Designs. 3 hours.

Prerequisite: STAT 4210.

Constructing and analyzing statistical experimental designs; blocking, randomization, replication and inter-

action; complete and incomplete block designs; factorial experiments; repeated measures; confounding effects.

Offered fall, spring, and summer semesters.

STAT 4230/6230. Applied Regression Analysis. 3 hours.

Prerequisite: STAT 4220 or STAT 6220 or permission of department.

Applied methods in regression analysis. Topics include univariate linear regression, techniques of multiple regression and model building, ANOVA as regression analysis, analysis of covariance, model selection and diagnostic checking techniques, nonlinear regression, and logistic regression.

Offered spring and summer semesters.

STAT 4240/6240. Sampling and Survey Methods. 3 hours.

Prerequisite: STAT 4210 or STAT 6210.

Design of finite population sample surveys. Stratified systematic, and multistage cluster sampling designs. Sampling with probability proportional to size. Auxiliary variables, ratio and regression estimators, non response bias.

Offered fall semester.

STAT 4260/6260. Statistical Quality Assurance. 3 hours.

Prerequisite: STAT 4220 or STAT 6220.

Basic graphical techniques and control charts. Experimentation in quality assurance. Sampling issues. Other topics include process capability studies, error analysis, SPRT, estimation and reliability.

Offered fall semester.

STAT 4270/6270. Least Squares Methods. 3 hours.

Prerequisite: STAT 4210 and MATH 2500.

Least squares techniques using matrices. Techniques of matrix algebra and calculus applied to regression and experimental designs.

Offered spring semester.

STAT 4280/6280. Applied Time Series Analysis. 3 hours.

Prerequisite: STAT 4510/6510.

Autoregressive, moving average, autoregressive-moving average, and integrated autoregressive-moving average processes, seasonal models, autocorrelation function, estimation, model checking, forecasting, spectrum, spectral estimators.

Offered fall semester.

STAT 4290/6290. Nonparametric Methods. 3 hours.

Prerequisite: STAT 4210.

Techniques and applications of nonparametric statistical methods, estimates, confidence intervals, one sample tests, two sample tests, several sample tests, tests of fit nonparametric analysis of variance, correlation tests chi-square test of independence and homogeneity sample size determination for some nonparametric tests

Offered spring semester.

STAT 4360/6360. Statistical Programming in SAS. 3 hours.

Prerequisite: STAT 4220 or STAT 6220 or STAT 4230/6230.

Statistical programming techniques, data manipulation, and presentation of analyses using SAS software package.

Offered spring semester.

STAT 4380/6380. Survival Analysis. 3 hours.

Prerequisite: [(STAT 4210 or STAT 6210) and STAT 4510/6510] or permission of department.

Methods for comparing time-to-event data, including univariate parametric and nonparametric procedures, regression models, diagnostics, group comparisons, and use of relevant statistical computing packages.

Offered spring semester.

STAT 4510/6510. Mathematical Statistics I. 3 hours.

Prerequisite: MATH 2500.

Concepts and basic properties of some special probability distributions, independence, moment generating functions, sampling distributions of statistics, limiting distributions.

Offered fall semester.

STAT 4520/6520. Mathematical Statistics II. 3 hours.

Prerequisite: STAT 4510/6510.

Methods and properties of point estimation, confidence intervals, minimum variance unbiased estimators, hypothesis testing, analysis of variance, linear regression.

Offered spring semester.

STAT 4710/6710. Introduction to Probability Theory I. 3 hours.

Prerequisite: MATH 2500.

Probability axioms, combinatorial analysis, random variables, univariate and multivariate distributions, expectations, conditional distributions, independence, and laws of large numbers.

Offered fall semester.

STAT 4720/6720. Introduction to Probability Theory II. 3 hours.

Prerequisite: STAT 4710/6710.

Central limit theorems, random walks, Markov chains and processes, Brownian motion, branching and renewal processes, diffusion processes and queueing processes and applications.

Offered spring semester.

(SWAH) Swahili

College of Arts and Sciences, Department of Comparative Literature

SWAH 1010. Elementary Swahili I. 4 hours.

Fundamentals of the Swahili language and culture. Emphasis on grammar, pronunciation, reading, writing, and conversational skills. Additional laboratory work required.

Offered fall semester.

SWAH 1020. Elementary Swahili II. 4 hours.

Prerequisite: SWAH 1010.

A continuation of Elementary Swahili I. Emphasis on register variation, advanced grammar, and culture.

Offered spring semester.

SWAH 2010. Intermediate Swahili I. 3 hours.

Prerequisite: SWAH 1020 or permission of department.

Introduction to complex linguistic and cultural structures, role of culture in language learning, reading and writing of literary texts, social history of the language.

Offered fall semester.

SWAH 2020. Intermediate Swahili II. 3 hours.

Prerequisite: SWAH 2010.

A continuation of Intermediate Swahili I. Introduction to literary texts, poetry, newspapers and magazines, and everyday language use.

Offered spring semester.

SWAH 3010. Advanced Swahili I. 3 hours.

Prerequisite: SWAH 2020.

Preparation for study or research using authentic Swahili material. Provides additional knowledge of East Africa through geography, history, political, and economic structures. Focus on critical reading and the interpretation of standard and colloquial Swahili.

Offered fall semester.

SWAH 3020. Advanced Swahili II. 3 hours.

Prerequisite: SWAH 3010.

A continuation of Advanced Swahili I. Focus on advanced reading and comprehension of novels, thematic texts, rhetoric, scientific materials, documents, and other archival materials. Substantial attention paid to historical and cultural aspects of the language.

Offered spring semester.

SWAH 3990. Directed Study in Swahili Language and Literature. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: Permission of department.

Independent study and research in Swahili language and literature under the direction of individual faculty members. Focus on reading and analysis of Swahili literary writings (including works in translation).

Non-Traditional Format: Directed study

Offered fall and spring semesters

(TELE) Telecommunications

College of Journalism and Mass Communication, Department of Telecommunications

TELE 3010. Introduction to Telecommunications. 3 hours.

The structure of world telecommunication systems with emphasis on the United States. Special attention is given to the regulatory features of the systems, the impact of technology, the economic dynamics, and the range of career possibilities.

Offered fall, spring, and summer semesters.

TELE 3010H. Introduction to Telecommunications (Honors). 3 hours.

Not open to students with credit in TELE 3010.

Prerequisite: Permission of Honors.

Global telecommunication systems, the evolution of broadcast technologies, and the production processes and audience research techniques of rapidly converging industries. The course also encompasses the regulatory, legal, and economic mechanisms influencing the marketplace. Class projects will emphasize strategies to affect social change via media channels.

Offered fall semester.

TELE 3110. Writing for Electronic Media. 3 hours.

Prerequisite: Permission of department.

The problems of writing for the telecommunications industry. Introduction to special scripting requirements of radio, television, film, recording, and cable formats. Emphasis will be upon working from the creation of the idea to final script.

Offered fall, spring, and summer semesters.

TELE 3210. Introduction to Production Basics. 3 hours.

Prerequisite: Permission of department.

Basic methods of pre-production, production, and post-production of radio, television, and electronic field production with additional emphasis on the creative, persuasive, and ethical application of these media in today's society.

Offered on a regular basis.

TELE 3310. Media Programming and Management. 3 hours.

Prerequisite or corequisite: TELE 3010.

The methods by which radio and television program schedules are developed, tested, implemented, and revised. Topics include program budgeting and finance, syndication, local origination, automation, ratings, and qualitative program research, program strategies, formats, and adapting radio/television programs for alternative distribution systems.

Offered fall and spring semesters.

TELE 3410. Media Research and Theory. 3 hours.

Prerequisite: TELE 3010 and permission of department. Major contemporary theories and research techniques relevant to the electronic media. Includes quantitative, qualitative, and critical approaches to media studies. Offered fall and spring semesters.

TELE 4250. Video Production. 3 hours.

Prerequisite: TELE 3210 and permission of department. The theory and techniques of informational video production. A studio production course with emphasis on video cameras, production switchers, character generators, microphones, audio mixers, lighting instruments and dimmers, basic set construction, lighting design, and program blocking. Extensive in-class production projects.

Offered on a regular basis.

TELE 4270. Audio Production. 3 hours.

Prerequisite: TELE 3210 and permission of department. Sound design, editing, and recording. Creative editing, sound layering, multi-track mixing of dialogue, music, and sound effects to achieve a sonic styling for radio, television, or film.

Not offered on a regular basis.

TELE 4290. Digital Media Production. 3 hours.

Prerequisite: TELE 3210 and permission of department. Production of digital audio and video materials. Topics will include the technology of digitization, compression techniques for digital media, the manipulation of digital content, delivery methods for digital media, applications for digital media.

Offered fall and spring semesters.

TELE 4350. Broadcast Management. 3 hours.

Prerequisite: TELE 3310 and permission of department. Theory and application of management practices in the administration of telecommunication businesses. Cost and revenue management, use of research, rate setting, capital and operations budgeting, personnel management, and program syndication.

Offered on a regular basis.

TELE 4420. Telecommunications Research. 3 hours.

Prerequisite: TELE 3410 and permission of department. Major analysis techniques commonly found in telecommunications research, including basic audience research techniques (such as ratings research, audience profiling, concept and program testing) and studies of the impact of production economics. Student participation in laboratory and field studies may be required.

Offered spring semester.

TELE 4450. Emerging Media Technologies. 3 hours.

New and proposed telecommunication technologies, including theoretical perspectives, techniques of analysis, and management strategies. Investigation of the social and psychological factors influencing the adoption and impact of these new technologies.

Offered spring semester.

TELE 5010. Mass Communication Internship. 3 hours.

Prerequisite: TELE 3010 and TELE 3210 and permission of department.

Supervised experience in mass communication.

Offered on a regular basis.

TELE 5170. Advanced Studies in Mass Communication. 3 hours.

Prerequisite: Senior standing and permission of department.

Independent study or special project in any area of mass communication. Written proposal outlining the work to be undertaken must be submitted and receive the instructor's approval before registration for the course. Students will be responsible for insuring the funding of their projects. Course may be taken through the University of Georgia Studies Abroad Program in Parma, Italy, and London, England.

Offered fall, spring, and summer semesters.

TELE 5250. Electronic Field Production. 3 hours.

Prerequisite: TELE 3110 and TELE 3210 and permission of department.

The creative challenge in shooting film style, involving directional creativity, theory, and application of production techniques from idea through to the complete project. This course requires a project which demonstrates creativity and production techniques.

Offered fall and summer semesters.

TELE 5260. Advanced Production. 3 hours.

Prerequisite: (TELE 4250 or TELE 5250) and permission of department.

A capstone course that demonstrates the student's knowledge and abilities in production, with emphasis given to directional creativity, production techniques from the conception of idea through scripting, editing, and sound track for a completed project that demonstrates knowledge in these areas.

Offered on a regular basis.

TELE 5440. History and Analysis of Electronic Programming. 3 hours.

Radio and television entertainment and informational programs are traced from their roots to the present through socio-cultural, technical, legal, and economic influences.

Offered fall semester.

TELE 5560. Electronic News Gathering Production. 3 hours.

Prerequisite: TELE 3110 and TELE 3210 and permission of department.

Production of telecommunications for news using portable videotape equipment and both analog linear and digital nonlinear editing equipment. Students will participate in field exercises involving the videotaping and editing of information messages intended for inclusion in television newscasts.

Offered fall semester.

TELE 5570. Broadcast News Writing and Producing. 3 hours.

Prerequisite: TELE 3110 and TELE 3210 and permission of department.

The gathering of information and writing of broadcast news copy as well as the processing of that information into radio and television news programs under deadline discipline, including the responsibilities and ethics of the broadcast news reporter.

Offered fall semester.

TELE 5580. Advanced Television News Reporting. 3 hours.

Prerequisite: TELE 5560 and TELE 5570 and permission of department.

Corequisite: TELE 5590.

Advanced methodology in the gathering of television news. Students will write, edit, produce, shoot, report, anchor under deadline pressure. Analysis of news sources and problems unique to broadcast journalists is emphasized in this intensive practicum.

Offered spring semester.

TELE 5590. Advanced Television News Producing. 3 hours.

Prerequisite: TELE 5560 and TELE 5570 and permission of department.

Corequisite: TELE 5580.

Advanced methodology in the production of television news. Student will manage an ongoing television news production under deadline pressure. Intensive practicum.

Offered on a regular basis.

TELE 5990. Seminar in Telecommunication. 3 hours.

Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department.

A seminar designed to synthesize and integrate many of the theoretical and practical approaches of the study of mass communication, giving opportunity through a variable topics seminar to analyze processes and effects of mass communication and to acquire specialized knowledge of specific mass media modes of presentation and production.

Not offered on a regular basis.

(TXMI) Textiles, Merchandising and Interiors

*College of Family and Consumer Sciences,
Department of Textiles, Merchandising and Interiors*

TXMI 2100. Textiles for Consumers. 3 hours

Textile study with emphasis on selection, use, performance, and care of textile products in the consumer's environment.

Offered fall semester.

Textiles, Merchandising and Interiors

TXMI 2520. Principles of Creative Clothing. 3 hours.
Application of art principles to clothing selection. Basic principles of clothing construction related to fabric, fit, and design of the garment.
Offered summer semester of odd-numbered years.

TXMI 3010. Directed Research. 1-12 hours. Repeatable for maximum 12 hours credit.
Prerequisite: Permission of department.
Designed for the senior major to permit independent study and research.
Non-Traditional Format: Independent study under the direction of a faculty member.
Offered fall, spring, and summer semesters.

TXMI 3210. Fundamentals of Fashion Merchandising. 3 hours.
Fashion with an emphasis on various product categories. Innovative processes in the fashion business. Concentration on fashion innovation, role of designers and other influentials. Domestic and international fashion centers, trends in fashion, and the power of fashion in society.
Offered fall semester.

TXMI 3240. Retail Planning and Buying. 3 hours.
Prerequisite: ACCT 2101.
Accounting concepts in relation to specific applications in merchandising; use of computers in merchandising.
Offered fall and spring semesters.

TXMI 3350. Residential Interiors and Furnishings. 3 hours.
Prerequisite: Sophomore standing.
Furnishing the home for contemporary living. Students apply design principles in planning furnishings for the home.
Offered fall and spring semesters.

TXMI 3360. Residential Design. 3 hours.
Prerequisite: Sophomore standing or permission of department.
Design communication by two-dimensional drawings of floor plans, sections, elevations, and axonometrics in traditional and contemporary residences.
Offered fall and spring semesters.

TXMI 3380. Interior Perspective and Media. 3 hours.
Prerequisite: TXMI 3360.
Methods for design communication through manipulation of two- and three-dimensional drawings.
Offered spring semester.

TXMI 3500. Textiles. 3 hours.
Prerequisite: (CHEM 1110 and CHEM 1110L) or (CHEM 1212 and CHEM 1212L).
Corequisite: TXMI 3500L.
Production and properties of textile fibers, yarns, and fabrics; study of dyeing and finishing processes.
Offered fall and spring semesters.

TXMI 3500L. Textiles Laboratory. 1 hour. One 2-hour lab period.
Prerequisite: (CHEM 1110 and CHEM 1110L) or (CHEM 1212 and CHEM 1212L).
Corequisite: TXMI 3500.
Laboratory experiments on fibers, yarns, fabrics, dyeing, and finishing.
Offered fall and spring semesters.

TXMI 3520. Textile Testing. 3 hours. Two 3-hour lab periods.
Prerequisite: (TXMI 3500 and TXMI 3500L) and (STAT 2000 or STAT 4210 or MSIT 3000).
Basic textile testing for end-use performance.
Offered fall and spring semesters.

TXMI 3530. Apparel Quality Analysis. 3 hours.
Structural approach to evaluating apparel quality. Identification of components in apparel structures.
Non-Traditional Format: Field trips.
Offered fall and spring semesters.

TXMI 3550. Environment, Science, and Technology 3 hours.
Application of chemical and scientific principles to environmental problems. Chemical processes in pollution and environmental degradation; basics of environmental legislation and regulations; technological developments and strategies in waste reduction and pollution prevention; effects of pollutants and hazardous substances; current environmental issues.
Offered fall semester.

TXMI 3570. Color Science. 3 hours.
Basic color theory; analysis of the use of color and color communication, with applications to the areas of apparel, interiors, textiles, and merchandising.
Offered fall semester.

TXMI 4100/6100. Advanced Textiles. 3 hours.
Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.
Fibers and finishes; emphasis on man-made fibers, new fiber, and finish developments and technology.
Offered fall semester.

TXMI 4110/6110. Textile Dyeing. 3 hours.
Prerequisite: TXMI 3500 and TXMI 3500L and permission of department.
Textile dyeing processes with emphasis on fiber-dye association. Analysis of dyeing techniques and properties of dyes and dyed materials.
Offered spring semester.

TXMI 4120/6120. Product Standards and Quality Analysis. 3 hours.
Prerequisite: (STAT 2000 and TXMI 3520) or permission of department.
Developing, maintaining, and assessing product standards from the initial design process to end uses of textile and apparel products. Quality assurance and

certification programs; governmental regulations; statistical analysis and control of benefits offered through standards.

Offered fall semester.

TXMI 4130/6130. Chemical and Instrumental Analysis of Polymers and Textiles. 3 hours.

Prerequisite: TXMI 3520 and TXMI 4100/6100 and CHEM 2410 and CHEM 2410L.

Theory and application of instrumental analysis to polymers, fibers, fabrics, dyes, and finishes.

Offered spring semester.

TXMI 4140/6140. Textile Finishing Processes. 3 hours.

Prerequisite: TXMI 3520 and TXMI 4100/6100.

Theory, application, evaluation, and identification of textile finishes and textile auxiliary processes. Examination of the role of finishing and types of finishes used in manufacturing fibers, yarns, and fabrics.

Offered fall semester.

TXMI 4150/6150. Nonwovens Science and Technology. 3 hours.

Prerequisite: TXMI 4100/6100 and permission of department.

Manufacture and conversion of nonwoven webs with examination of interrelationships involving raw materials, bonding systems, manufacturing processes, product properties, and end uses.

Offered fall semester of odd-numbered years.

TXMI 4220. Fashion Image Development and Promotion. 3 hours.

Prerequisite: MARK 3000 or permission of department.

Techniques of image development in the merchandising of fashion goods. The development of displays and promotions appropriate to various store images.

Offered spring semester.

TXMI 4230/6230. Clothing and Human Behavior. 3 hours.

Prerequisite: PSYC 1101 or SOCI 1101.

The study of clothing with particular emphasis on psychological, sociological, and economic aspects of clothing.

Offered fall semester.

TXMI(DRAM) 4270/6270. History of Costume: Antiquity to Nineteenth Century. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Interrelationships of costume and social, cultural, political, and economic environments from antiquity to the nineteenth century.

Offered fall semester of odd-numbered years.

TXMI 4290/6290. History of Costume from the Nineteenth Century to Present. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department.

Interrelationship of costume and social, cultural, political, and economic environments from the nineteenth century to present day.

Offered spring semester.

TXMI 4330/6330. American Interiors and Furnishings. 3 hours.

American interior design and furnishings from the seventeenth to the twentieth centuries. Identification of styles as well as social, cultural, and historic influences.

Offered spring semester.

TXMI 4340/6340. Historic Interior Materials. 3 hours.

Prerequisite: TXMI 4330/6330 or permission of department.

Ceiling, wall, and floor coverings, window treatments, upholstery, and lighting in historic American interior design, with emphasis on analysis and selection.

Offered spring semester of even-numbered years.

TXMI 4350/6350. Historical Homes and Furnishings. 3 hours.

Prerequisite: [TXMI 3350 and ARST 2000] or permission of department.

The architecture, interiors, and furnishings in the western world from the ancient Egyptian era through 1850.

Offered fall semester.

TXMI 4360/6360. Decorative Accessories for the Home. 3 hours.

Prerequisite: TXMI 3350 or permission of department.

Historical and cultural development of accessories used in the home including ceramics, metals, and textiles. Design and characteristics of materials in these accessories will be covered.

Offered fall semester.

TXMI 4370/6370. Contemporary Homes and Furnishings. 3 hours.

Prerequisite: (TXMI 3350 and ARST 2000) or permission of department.

Contemporary developments in architecture, interiors, and furniture from 1850 to the present day.

Offered fall semester.

TXMI 4380/6380. Interior Fabrics and Materials: Specifications and Estimations. 3 hours

Prerequisite: (TXMI 3520 and senior standing) or permission of department.

Construction, fibers, and finishes for fabrics with emphasis on quality, durability, and utilization of current materials for soft floor coverings, window treatments, and upholstery. Estimations and specifications.

Offered fall semester.

Textiles, Merchandising and Interiors

TXMI 4520/6520. Apparel and Textile Economics. 3 hours.

Prerequisite: [TXMI 3500 and TXMI 3500L and (ECON 2106 or ECON 2105)] or permission of department. Organization and functions of apparel and textile industries. Factors related to production, distribution, and consumption of apparel and household textiles. Offered fall semester.

TXMI 4530. International Textiles and Apparel: Europe. 3 hours.

Prerequisite: TXMI 3500 and TXMI 3500L. Textile and apparel production and distribution in relation to the culture, politics, and policies of major textile and apparel industries in Europe. Emphasis placed on impact of global issues on marketability and availability of textile and apparel products. Offered fall semester of odd-numbered years.

TXMI 4540/6540. International Textiles and Apparel: Asia. 3 hours.

Prerequisite: TXMI 3500 and TXMI 3500L. Textile and apparel production and distribution in relation to the culture, politics, and policies of major textile and apparel industries in Asia. Emphasis placed on impact of global issues on marketability and availability of textile and apparel products. Offered fall semester of odd-numbered years.

TXMI 4550. International Textiles and Apparel: Americas. 3 hours.

Prerequisite: TXMI 3500 and TXMI 3500L. Textile and apparel production and distribution in relation to the culture, politics, and policies of Canada, Latin America, and the Caribbean. Emphasis on global issues impacting on marketability and availability of textile and apparel products. Offered spring semester of odd-numbered years.

TXMI 4580/6580. History of Textiles in Europe and America. 3 hours.

Prerequisite: (TXMI 3500 and TXMI 3500L) or permission of department. Textiles and the textile industry in prehistoric, ancient, medieval, and modern eras, with special emphasis on Western European and American textiles. Offered fall semester of even-numbered years.

TXMI 4960H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors. Individual study, reading, or projects under the direction of a project director. Non-Traditional Format: Directed study. Not offered on a regular basis.

TXMI 4970H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors.

Individual study, reading, or projects under the direction of a project director.

Non-Traditional Format: Directed study. Not offered on a regular basis.

TXMI 4980H. Directed Reading and/or Projects (Honors). 3 hours.

Prerequisite: Permission of Honors. Individual study, reading, or projects under the direction of a project director. Non-Traditional Format: Directed study. Not offered on a regular basis.

TXMI 4990H. Honors Thesis. 3 hours.

Prerequisite: Permission of Honors. Individual research in the major field. Non-Traditional Format: Honors thesis. Not offered on a regular basis.

TXMI 5240/7240. Retailing Apparel and Textiles. 3 hours.

Prerequisite: MARK 3000 or permission of department. Retailing, retail organizational structures, merchandising, and organization of market resources in apparel and textiles. Emphasizes concepts applicable to the apparel and textile industry. Offered spring semester.

TXMI 5310/7310. Residential Interiors and Economic Resources. 3 hours.

Prerequisite: [TXMI 3380 and TXMI 4380/6380] or permission of department. Residential space planning and selection of fabrics, finishes, and furnishings using specified amounts of economic resources. Offered fall semester.

TXMI 5320/7320. Residential Design Practices. 3 hours.

Prerequisite: Senior standing and permission of department. Relationships between the designer, wholesaler, and retailer in the home furnishing industry. Designer and client relationships with emphasis on retailing practices and economic resources in the residential design firm. Offered fall semester.

TXMI 5330. Computer-Aided Residential Design. 3 hours.

Prerequisite: TXMI 3360 and junior standing. Drawing tools and editing in the CAD program. Creation, modification, storage, retrieval, and management of AutoCAD drawings. Offered spring semester.

TXMI 5710/7710. Study Tour in Textiles, Merchandising and Interiors. 3-6 hours. Repeatable for maximum 6 hours credit.

Prerequisite: Permission of department. An on-location study of clothing, textiles, fashion merchandising, and residential interiors and furnishings. Includes lectures by recognized leaders in the

fields; meetings with designers, manufacturers, merchants and field trips to designers' showrooms or studios, manufacturing plants, distribution centers, retail stores, and museums.

Non-Traditional Format: Lecture, tour, and other activities for the length of the program.
Not offered on a regular basis.

FXMI 5900. Internship Orientation. 1 hour.
Internship orientation for Fashion Merchandising majors.
Offered fall semester.

FXMI 5910. Textiles, Merchandising and Interiors Internship. 3-9 hours.
Prerequisite: Permission of department.
Supervised work experience in textiles, clothing, interiors, and furnishings in a business firm off campus.
Non-Traditional Format: Internship.
Offered fall, spring, and summer semesters.

(UNIV) University Orientation

Division of Academic Assistance

UNIV 1101. Topics in Academic Assistance. 1-3 hours. Repeatable for maximum 9 hours credit.
Opportunity for students throughout the University to study significant topics in a particular area on a non-recurring basis, to address topics needed only periodically by a select group, and/or to consider emerging topics on a pilot basis.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1102. Learning to Learn. 3 hours.
Focuses on learning strategies that lead to success in college, including studying in a variety of disciplines, note taking skills, critical reading, and test preparation strategies.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1103. Strategies for Academic Success. 2-3 hours.
Provides students with a better understanding of their personal abilities, interests, and competencies and to ascertain how these aspects of one's self enhance or hinder academic performance. Students will develop effective plans to overcome barriers to academic success.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1104. Topics in Problem Solving. 2-3 hours.
Problem solving, critical and analytical thinking skills, logical thought development, probability, spacial relationships.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1105. Improving Grammar, Usage, and Style. 3 hours.
Reviews conventions of grammar, usage, punctuation, and sentence structure in order to help students edit their papers more effectively and to write in a clearer style.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1106. Basic Report Writing for College and Beyond. 3 hours.
Not open to students with credit in ENGL 3590.
Prerequisite: ENGL 1101.
Practice in composing short technical and business documents. Attention to the essentials of effective writing, including audience analysis; concise, readable style; and correct grammar and mechanics.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Not offered on a regular basis.

UNIV 1107. Enhancing Thinking Skills. 2-3 hours.
To assist students in developing higher level thinking skills. Students will be active participants in the class, engaging in creative problem solving, small group discussions and response writing. A variety of media will be used to elicit student ideas and opinions.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 1108. Preparation for Statistics-Based Courses. 3 hours.
The algebra of statistics and basic statistical concepts. These concepts will be used in analyzing and interpreting real data.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters

UNIV 1109. Resources for Research. 3 hours.
Students investigate their selected topic through library resources (reference books, GALIN, GALILEO, and hardcopy indexes), the World Wide Web, and a personal research project (interview, survey, or observation). Students critically assess both the research tools and the information they find, as shown in oral and written reports.
Non-Traditional Format: This course carries institutional credit and will not count toward graduation.
Offered fall, spring, and summer semesters.

UNIV 2201. Introduction to the Research Paper. 3 hours.

Prerequisite: ENGL 1102.

Basics of writing the academic research paper: using resources of the University libraries, gathering sources, taking notes, avoiding plagiarism, documenting sources, organizing the paper, and creating a voice and style suitable to audience and purpose. Course may be taken through UGA Studies Abroad program in England - Oxford Program.

Non-Traditional Format: This course carries institutional credit and will not count toward graduation.

Offered fall, spring, and summer semesters.

(VETM) Veterinary Medicine

College of Veterinary Medicine

VETM 4960H. Directed Readings and/or Projects (Honors). 3.3 hours.

Prerequisite: BCMB(BIOL)(CHEM) 3100 and permission of Honors.

A directed study in one of the basic sciences in the College of Veterinary Medicine. Includes library and laboratory learning experiences not otherwise available to undergraduate students.

Non-Traditional Format: Course is taught in a research format. Hours per week vary depending on stage of project.

Offered fall, spring, and summer semesters.

VETM 4970H. Directed Readings and/or Projects (Honors). 3.3 hours.

Prerequisite: Permission of Honors.

A directed study in one of the basic sciences in the College of Veterinary Medicine. Includes library and laboratory learning experiences not otherwise available to undergraduate students.

Non-Traditional Format: Course is taught in a research format. Hours per week vary depending on stage of project.

Offered fall, spring, and summer semesters.

VETM 4990H. Honors Thesis. 3.3 hours.

Prerequisite: Permission of Honors.

Guidance by a faculty member in writing an honors thesis.

Non-Traditional Format: Course is taught in a research format. Hours per week vary depending on stage of project.

Offered fall, spring, and summer semesters.

(VPHY) Physiology and Pharmacology

College of Veterinary Medicine, Department of Physiology and Pharmacology

VPHY 3100. Elements of Physiology. 3.3 hours.

The mammalian body as a single functional unit; studies include nervous, muscular, respiratory, circulatory, digestive, renal, endocrine, and reproductive systems.

Offered spring semester.

(WMST) Women's Studies

College of Arts and Sciences

WMST 1110. Multicultural Perspectives on Women in the United States. 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in WMST 1110H.

Experiences of women in selected racial and ethnic communities: Latinas/Chicanas, African Americans, Native Americans, Asian Americans, and other women in contemporary United States.

Offered fall and spring semesters.

WMST 1110H. Multicultural Perspectives on Women in the United States (Honors). 3 hours. Two lectures and one 1-hour lab period.

Not open to students with credit in WMST 1110.

Prerequisite: Permission of Honors.

Experiences of women in selected racial and ethnic communities: Latinas/Chicanas, African Americans, Native Americans, Asian Americans, and other women in contemporary United States.

Offered spring semester.

WMST 2010. Introduction to Women's Studies. 3 hours.

Not open to students with credit in WMST 2010H.

Prerequisite: Sophomore standing.

The study of women of diverse racial, ethnic, and class backgrounds. Topics include contemporary concerns within women's studies: labor markets, health, reproduction, socialization, language, media representations, law, and public policy.

Offered fall and spring semesters.

WMST 2010H. Introduction to Women's Studies (Honors). 3 hours.

Not open to students with credit in WMST 2010.

Prerequisite: Permission of Honors.

The study of women of diverse racial, ethnic, and class backgrounds. Topics include contemporary concerns within women's studies: labor markets, health, reproduction, socialization, language, media representations, law, and public policy.

Offered fall semester.

WMST(CSCI) 2040-2040L. Gender and Computing: Information Systems Design. 3 hours. Two lectures and one 2-hour lab period.

Computers and the internet as tools of knowledge to empower the user. Issues raised will be from gender and technology literature. Laboratory sessions will provide hands-on experience with information systems design and computer programming culminating in the creation of a community-based information system. Offered spring semester.

WMST 3100. Lesbian and Gay Studies. 3 hours.

Prerequisite: Permission of department or one WMST course.

Investigation of same-sex desire, heterosexuality, homosexuality, and the regulation of sexual identities across different racial/ethnic and class/regional communities. Focusing on Native American, African American, Latino, Asian American, and international studies, with texts from law, anthropology, history, film, fiction, and theory.

Offered fall semester.

WMST 3110. Gender, Race, and Class. 3 hours.

Prerequisite: WMST 1110 or WMST 2010 or permission of department.

Issues of gender, race, and class intersecting in the lives of women in the United States. Historical and social construction of gender, race, and class which have shaped the productive, political, and cultural experiences of women of diverse backgrounds will be examined.

Not offered on a regular basis.

WMST 4010/6010. Introduction to Feminist Theories. 3 hours.

Prerequisite: Undergraduate level only: (WMST 1110 or WMST 2010) and permission of department. The historical origins, philosophical assumptions, and political implications of contemporary feminist theories, including conservative, liberal, radical and ecological feminist theories.

Offered fall, spring, and summer semesters.

WMST 4020. Seminar in Advanced Feminist Studies. 1-3 hours. Repeatable for maximum 9 hours credit.

Prerequisite: WMST 4010/6010 or permission of department.

Topics of scholarly interest in advanced feminist theory. Offered fall semester of odd-numbered years.

WMST 4120/6120. Biology and Politics of Women's Reproduction. 3 hours.

Prerequisite: Undergraduate level only: Permission of department.

Women's reproductive life cycles from the perspective of evolutionary biology and the political theory of radical feminism. Topics include puberty, sexual cycling, menarche, pregnancy, childbirth, and menopause. Feminist critiques of science are explored.

Offered fall semester of odd-numbered years.

WMST 4250/6250. Special Topics in Women's Studies. 3 hours. Repeatable for maximum 12 hours credit.

Prerequisite: WMST 4010/6010 or permission of department.

Ongoing and current topics of scholarly interest in women's studies.

Offered fall and spring semesters.

WMST 4950. Directed Studies in Women's Studies. 1-3 hours. Repeatable for maximum 6 hours credit.

Prerequisite: WMST 4010/6010 and permission of department.

Readings and independent research closely supervised by a faculty member on a specific interdisciplinary topic in women's studies.

Non-Traditional Format: Directed study.

Offered fall, spring, and summer semesters.

(YORB) Yoruba

College of Arts and Sciences, Department of Comparative Literature

YORB 1010. Elementary Yoruba I. 4 hours.

Foundation in spoken and written Yoruba. Focus on oral and aural skills, basic grammar. Additional laboratory work required. Introduction to Yoruban culture. Offered fall semester.

YORB 1020. Elementary Yoruba II. 4 hours.

Prerequisite: YORB 1010.

A continuation of Elementary Yoruba I. Increased focus on grammar and culture, reading and conversation.

Offered spring semester.

YORB 2010. Intermediate Yoruba I. 3 hours.

Prerequisite: YORB 1020.

Focus on developing fluency in spoken and written Yoruba. Oral work geared towards building effective communication in day-to-day situations and functional tasks. Readings in authentic Yoruban texts of increasing complexity. Advanced cultural discussion.

Offered fall semester.

YORB 2020. Intermediate Yoruba II. 3 hours.

Prerequisite: YORB 2010.

A continuation of Intermediate Yoruba I. Introduction to additional literary texts, including poetry, newspapers, magazines.

Offered spring semester.

YORB 3010. Advanced Yoruba I. 3 hours.

Prerequisite: YORB 2020.

Designed to prepare students to travel to Nigeria and for research using authentic research materials. Study of geography and of political and economic structures of Nigeria and West Africa. Focus on reading Yoruban texts.

Offered fall semester.

YORB 3020. Advanced Yoruba II. 3 hours.

Prerequisite: YORB 3010.

Advanced readings, novels, thematic texts, and rhetoric. Focus on developing comprehension of textual materials. Introduction to scientific and other specialized materials.

Offered spring semester.

YORB 3990. Directed Study in Yoruban Language and Literature. 1-3 hours. Repeatable for maximum 3 hours credit.

Prerequisite: Permission of department.

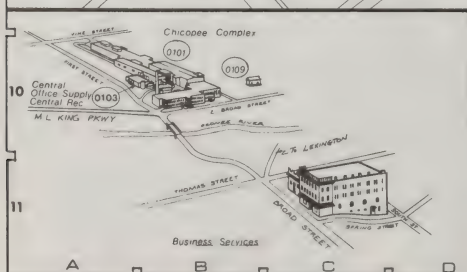
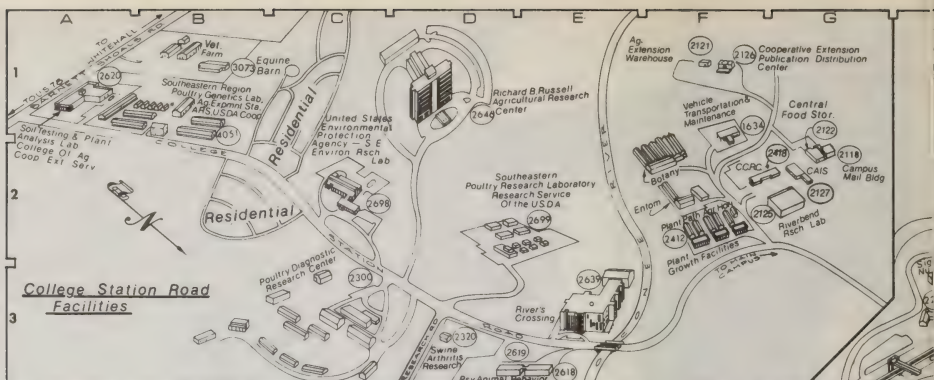
Independent study and research in Yoruban language and literature under the direction of individual faculty.

Focus is on reading and analysis of Yoruban literary texts (including works in translation from Yoruba-speaking communities in Africa and the Diaspora).

Non-Traditional Format: Directed study.

Offered fall and spring semesters.







Georgia

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